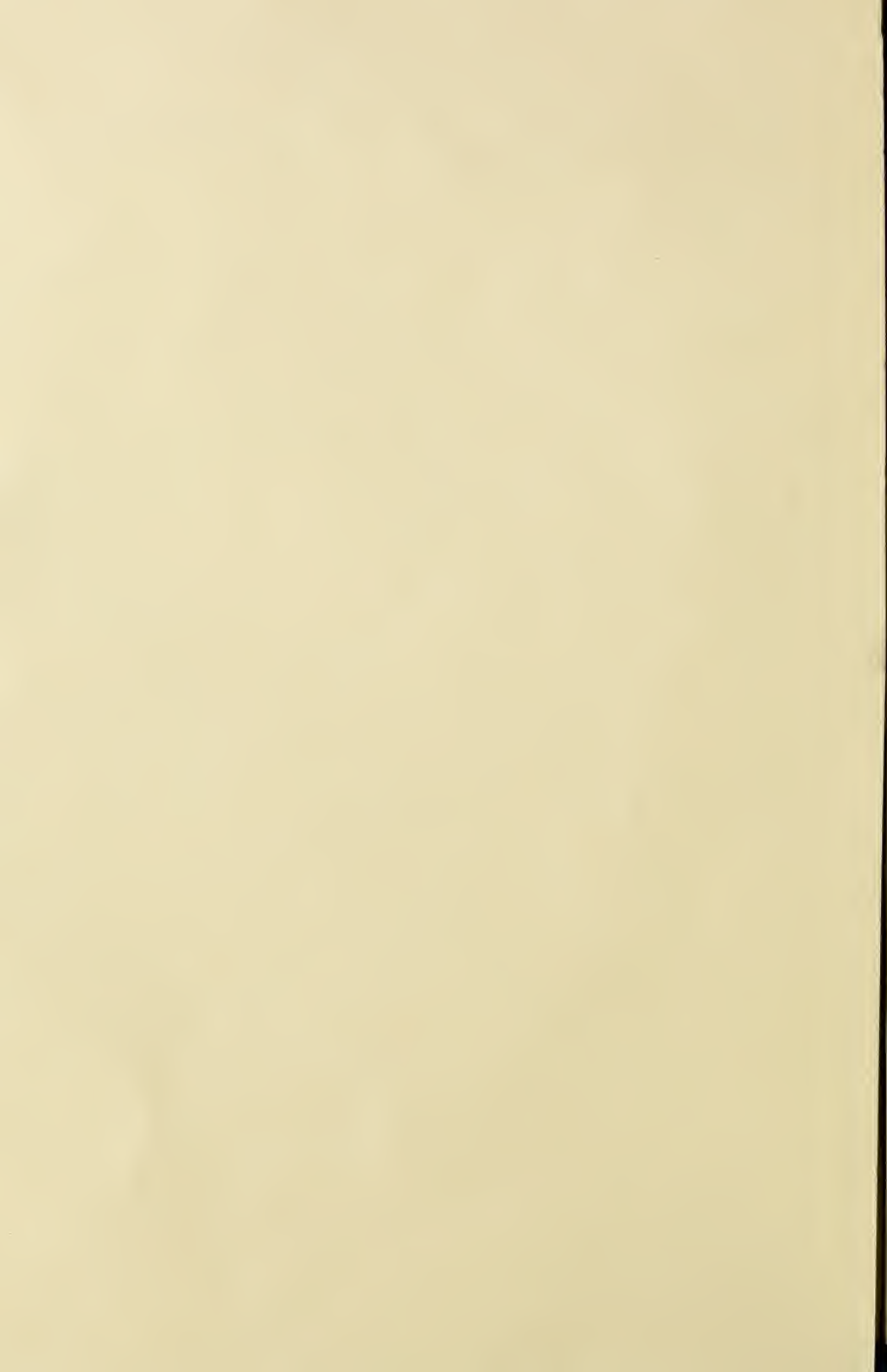


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MARYLAND FARMER AND MECHANIC:

DEVOTED TO

Agriculture, Horticulture, Rural Economy & Mechanic Arts.


Vol. 1.

BALTIMORE, MARCH 1, 1864.

No. 3.

TO OUR AGRICULTURAL READERS.

There are many of our readers who have been accustomed to make original observations on the best mode of producing farm crops, and the most advantageous system of rotation in crops, in view of the particular character of the soil to be cultivated.—Such of these among our friends who have any thing to communicate that may be of interest to the farming community generally, cannot, we respectfully represent, do better than to furnish “THE FARMER AND MECHANIC” with the results of their experience. Every experiment when carefully conducted and carried out is of value, whether it was successful or otherwise. If it failed, it acts as a warning to others not to make a similar attempt; if it succeeded, it is of advantage to know the details, so that the example may not be lost. We solicit from practical men and independent thinkers communications of the character alluded to. They should, however, be brief and to the point, and it is of advantage to have them written on one side of the paper only.—We also invite enquiries upon any subject connected with agriculture. Believing that this mode of furnishing information frequently touches directly upon points that may be occasionally overlooked by the agricultural writer, all such questions shall be cheerfully answered either editorially or otherwise.

 GET UP CLUBS OF FIVE.—There is no neighbourhood in which a club for the “FARMER” cannot be raised—and if only *five subscribers* are obtained, a sixth copy will be received by the person getting up the club. Surely every head of a family should feel some interest in having such a work as the FARMER read by their household. Not a line will be found in its pages, but will be calculated to interest and instruct every member, from the oldest to the youngest.

POSTAGE ON THE “FARMER” is only 3 cents per quarter, if paid in advance by the recipient—or 12 cents a year payable in advance at the office where received.

ELEMENTS OF LANDSCAPE GARDENING.

Number Three.

TRANSPLANTING TREES.

In our last number we endeavoured to give the reader some plain practical hints in regard to the disposition of trees, groups, and masses, in laying out the grounds of a country place. As connected intimately with this branch of the subject, we now proceed to furnish suggestions with respect to the kind of trees that are most available for this purpose. Where a skilful landscape gardener and an equally skilful arboriculturist are employed, a much greater variety of trees may be resorted to, and the picturesque effect of vivid contrasts and harmonious combinations of foliage, will, of course, be much more perfect. But we are writing at this time for a different class of improvers—a class who seek by a small outlay to decorate the farmstead and the cottage, and to do it chiefly by their own labour, and to draw their materials from the most easily available sources. Now, then, in regard to such trees as are most excellent for this purpose, and are most easily transplanted, it must be borne in mind that the choice is comparatively limited and varies with the soil to which they are to be transferred. Oaks, for instance, are in all cases, difficult to transplant, and, although, when properly removed they will flourish vigorously in a good clay soil, they would languish and droop in a light sandy loam. With respect to pines, the case is altogether different.—The latter love a sandy soil and are equally out of place on stiff lands. The great value of a shade tree to the mass of improvers consists then in its possessing the property of transplanting easily.—All gardeners will advise, that such as are raised in a nursery are preferable to those growing naturally in the woods. Young trees standing in the open field or growing on the outskirts of woods may, however, be quite as successfully transplanted as those which are drawn from nursery grounds.—Meehan, a most excellent authority on this subject,

gives the following reasons why trees taken from the woods do not thrive as well as those that are obtained in more open situations. He remarks :— "There are two sets of roots to most trees; perhaps to all. One consists of *fibres*, the sole office of which is to draw matter from the soil for the use of the tree. The other consists of *true roots*, which extend and keep the tree in position, affording, at the same time, channels for the conveyance of the food absorbed by the fibres." The fibres are in fact the mouths of the tree, as the leaves constitute, in a like degree, its breathing apparatus. The fibres are moreover, "of annual growth, dying out after a season's service and being renewed by fresh ones." This opinion, though broadly advanced, is open to question, and certainly admits of exception. We come now to this point. The trees which remove most easily are those which have an abundance of fibres. There are, however, some trees in which this rule does not hold good, as, for instance, the mulberry and the locust. The theory is correct in the main nevertheless. Trees generally which throw out strong roots and but few fibres are singularly difficult to transplant, and rarely succeed at all when taken from the woodlands. On the other hand, those that have an abundance of fibres can be removed with the certainty of establishing themselves in their new quarters provided proper care be taken that the soil is well prepared to receive them, and that they do not suffer from drouth in the earlier stages of their new growth. The advantage of taking trees from a nursery is that they have a greater abundance of fibres than trees taken from their natural place of growth. The cause of this is obvious enough when we recollect that such trees have been transplanted into the nursery when very young, and that from having been frequently root trimmed have thrown out, as a consequence, innumerable rootlets and an abundance of fibres. Of trees growing wild, if we may so express ourselves, those best adapted for transplanting are the Maples, the Silver Poplar, the Ash, the Locust, the Catalpa, the Aspen, Sycamore, Mulberry, the Chestnut, the Willow, and, although of a slower growth, the Beech. Taken from the nursery the selection has, of course, a much wider range, and includes such trees as the Polonia, Magnolias, Mountain Ash, Kentucky Coffee tree, the Tulip tree, the Linden, together with quite a variety of flowering trees of medium size and growth, and of whose great value and beauty we propose to write more at large in a future number.

The trees best adapted for transplanting are those that are quite young and thrifty. It is, nevertheless, very frequently desirable, that a few trees of larger growth should be at once planted to give a clothed aspect to a place that has been previously bare of ornament. These can be had if proper care

be taken in their removal, but the advantage they give is only a temporary one. If largish trees are absolutely regarded as a necessity, the only way to transplant them, in our climate, with success, is to dig a trench around them in the autumn, leaving a ball of earth about the roots from three to four feet in diameter, and from two to three feet deep. Suffer this to remain throughout the winter, and then remove the tree with the frozen ball early in the spring, to the position where it is to stand permanently. These trees will unquestionably grow, but they take many years before they recover from the shock and from the loss of so large a quantity of their roots and fibres. They must, moreover, be well headed back before transplanting to compensate, in some measure, for the loss of roots. If young thrifty trees are planted properly the vigor of their growth is not sensibly impeded. They proceed at once to put out new rootlets and fibres and will eventually outstrip the trees of older growth. It is a difficult thing to determine whether autumn or spring planting is to be preferred. Both seasons have their advocates, and the reasons advanced in favour of each are so nicely balanced that the choice of time may as well be left to the improver. But at whatever period the planting takes place it is essential that the soil should be in good condition; that the holes for the reception of the trees should not be less than three feet across and from two to two and a half feet deep—much larger holes would be even more advantageous to the subsequent growth of the tree. In planting young trees, see that none of the roots are mutilated, that the soil is finely pulverized in which the trees are to stand—that the roots are spread out carefully with the fingers; that all the interstices about the roots are well filled in, and that when the operation of setting the tree is completed it does not stand deeper in the soil than it stood originally in the nursery or in the field.—Water applied sparingly will also be found of service during the process of planting, and a mulch of light litter around the tree when all is completed, should never be omitted. With these precautions, trees so planted will thrive vigorously.

CONCENTRATED POTATOES.—At a factory in Portland, Me., nearly 1,000 bushels of potatoes are "concentrated" for the army every day. All the water is absorbed, leaving about five pounds of nutriment to the sixty pounds which a bushel of potatoes averages, and that concentration is ground up, giving it the appearance of Indian meal. It is cooked by returning the water to it in a boiling state, and keeping it hot from ten to fifteen minutes, when it swells like starch, and assumes the appearance of potatoes prepared for the table.

HINTS ON COUNTRY HOUSES.

Number Three.

What a Country House ought to be.

We take it for granted that the object of building a country house is not simply for the purpose of affording some sort of shelter to the family that is to inhabit it, but that the intention of the owner is in reality to promote domestic comfort in the highest possible degree within the limit of his means.—We are sorry to say, nevertheless, that this praiseworthy idea is very rarely carried out. Utility is but too often sacrificed to cheapness, and instead of a structure which shall last through many generations and which shall, at the same time, be not only an ornament to the neighbourhood, but a graceful feature in the landscape, we have a frail clapboarded thing with great staring windows, frequently without blinds or shutters, and quite as frequently without any protecting porches or verandahs, with the exception of a small pent-house over the front door. Now all such dwellings, whether they be cottage or farm house, possess one of the very gravest defects which it is possible for them to have in our variable climate. They are intolerably hot in summer and they are intolerably cold in winter. They cannot be cooled by any imaginable device, when coolness is the first of essentials, nor can they be heated to a cheerful and uniform warmth in winter, with all the expenditure of wood or coal that men in ordinary circumstances are either willing or able to disburse. In structures composed of rough stones drawn from the surrounding fields, or from quarries in the vicinity, these evils are at least partially removed, so far as protection from the variations of temperature are concerned. But such buildings are frequently damp and, therefore, and to that extent, unhealthy, from the fact that stone absorbs moisture by capillary attraction, and that no care is taken to obviate the defect by setting the lower courses in cement and continuing them to about two feet above the surface of the soil, and also by nailing strips vertically on the interior walls and lathing and plastering over these, instead of on the surface of the stone itself. If this were done and the roof were made to project over the eaves about two feet, and simple but sturdily constructed porches were thrown across the front to afford additional shade in summer, and protection from driving storms in winter, a stone house would be preferable in the country to almost any other. A similar, though not so effective or so permanent a result may be obtained by filling in with brick such houses as are constructed of wood—the difference in cost being more than compensated by the increased economy thereby effected in warming such a house in winter, and its greater coolness in summer. It

should, moreover, be borne in mind that a house built in the manner we have suggested whilst it is refreshingly cool at the season when coolness is most desirable, is also, by virtue of its mode of construction, capable of retaining warmth and of repelling cold in winter, and thus it is that it meets the two-fold exigencies of a climate that is semi-tropical in July and August, and semi-arctic from December to February.

We now turn to another point. The great majority of houses in the country are not only clumsily contrived but are simply plain oblong, or square boxes, that are as unsightly to the eye as they are uncomfortable in their interior arrangements. It is very easy, in many instances, to change the first mentioned defect by a simple modification of their exterior form, by drawing over the roof and bracketing it; by placing hoods over the windows wherever inside shutters are preferred, and, above all, by the liberal adoption of verandahs and porches.—When the latter are trellised and covered with running vines and climbing roses, they constitute the beau ideal of what a country house should be. Alterations in the interior of a house of this kind are usually much more difficult to effect; but there are cases which will admit even of this improvement.

Now, as regards those country houses which are designed, in contradistinction to villa residences, for occupation all the year round—we allude to farm houses and the dwellings of those who make the country their permanent place of residence—the primary considerations, both in building a new house or in renovating and improving an old one, should be comfort and convenience. Every thing that appertains to the domestic *menage* should be so arranged as to lighten the labour of the household; for there are seasons when that labour becomes especially heavy and onerous wherever due provision has not been made to meet such exigencies. Economy is also consulted in this. We would, moreover, in furnishing a country house—properly so called—have every thing plain, substantial and solid. The furniture should be for use, and not at all for show. There should be no best parlour to be hermetically sealed against intrusion, except in the case of visitors. We would drape the windows with heavy curtains in winter and with venetian blinds in summer, and, finally, we would consult a sense of fitness in all things that relate to the dwelling and to the circumstances of those who inhabit it.

It is the law in Japan that no fir or cypress tree can be cut down without the permission of a magistrate, and for every full-grown tree that is felled a sapling must be planted.

Our Agricultural Calendar.

Farm Work for March.

We trust that now the farmer and planter are entering upon the very press of the spring work, they have so improved their opportunities, during the preceding months, that they are prepared, at all points, as to enable them to take time by the forelock and to proceed with their regular farming operations without let or hindrance. Nothing at this period ought to delay, for a single moment, the regular and steady progress of the work in the field.—The agricultural implements, wagons, carts, harness, tools, and machinery of all kinds, should be not only of the very best kinds, but in the very best possible order. There should be no need to lose precious days in repairing fences, mending or making gates, or in hauling wood for domestic use; for all these things should have been accomplished before the spring work commences. The arrangement of the crops should also be adjusted, and manure collected and mixed with woods earth, marsh mud, plaster, ashes, bones, salt, and all sorts of refuse matter, for composts. Such manure as is required early should be in a condition to haul out, and, for the work proper to the month we offer the following suggestions.

OATS.

We described in the FARMER for last month the best mode of preparation for good crops of oats, together with the soil best adapted to the production of this useful cereal and the various composts and fertilizers most applicable to the wants of the plant. To our number of February we accordingly refer the reader for information on those points. We proceed however to give

Time of Sowing.—The sooner this crop can be got in after the frost is out of the ground the better will be the prospect, under ordinary circumstances, of a satisfactory product. In our variable climate it is manifestly impossible to state the exact time at which oats should be seeded, and the only general rule that can be given is to sow as soon as the frost is out of the ground, and the soil is in good condition to plough. A grass sod, and heavy rather than light land, is the best adapted for oats.

Quantity of Seed to the Acre.—If the soil is in good condition do not sow less than two bushels of seed to the acre. Be careful not to sow light oats, but choose the best and heaviest that are to be had in the market.

SOWING CLOVER SEED.

If clover has not already been seeded among the growing wheat, go to work and get it in as speedily as possible. We prefer always to seed with the clo-

ver, especially on light uplands, about a bushel or bushel and half of orchard grass to the acre. They grow well together, ripen about the same time, and if the land is in good heart the mixture adds greatly both to the acreable product and to the value of the hay. After oat seeding we should at once grass down with clover and orchard grass unless, as in the Pennsylvania rotation of crops, corn is to follow oats; but this, in our opinion, is a vicious practice, and deserves to be amended. In seeding clover and orchard grass, sow each separately, bush in, and follow with the roller.

PERMANENT PASTURE.

If you have not provided a permanent pasture do so without delay. Its advantages for the use of the stock on the farm are incalculable. If soiling and stall feeding were generally observed, which we regret to say is not at all the case, even then a pasture where the stock could be allowed to range occasionally, would be found of great advantage. Before seeding down to permanent pasture the land should be made thoroughly clean and very rich, and to protect the grasses from the effects of drouth should be deeply ploughed, and put in the finest possible condition of tilth.

EARLY POTATOES.

Whenever the frost is fairly out of the ground potatoes for early use should at once be planted. Indeed, in the Middle States experience has shown that the finest crops of potatoes are generally those that have been planted at an early period of the season. If the main crop is not planted until the latter part of April or the beginning of May it commences to form its tubers during the hottest months of the year, and as the potato loves coolness and moisture the product is naturally very much diminished.—Great depth of ploughing and a rich soil, thoroughly pulverized, are the best preparations for the profitable cultivation of this valuable root. Old meadows, newly broken up, bring the heaviest crops, and next to these, new lands, or such as are abundant in potash. If the soil is poor we recommend, where well rotted barn-yard manure is not to be had, either of the following mixtures, which will be found sufficient for one acre:

No. 1—10 bushels of unleached ashes—2 bushels of refuse salt—5 bushels of lime—1 bushel of plaster. Mix thoroughly together and keep under cover until wanted in the field.

Add to the above 15 two horse loads of stable or barn yard manure—or the same quantity of manure and surface mould from the woods. Incorporate all together, and after standing in bulk for a few days, cart out and apply.

No. 2—100 lbs. phosphatic Guano—10 two horse loads of wood mould or swamp muck—2 bushels of refuse salt, and 5 bushels of unleached ashes, will

be also found an excellent compost for an acre of potatoes.

FENCES AND GATES.

See that these are thoroughly repaired before the press of the Spring work begins—seize every available opportunity to replace the old fashioned fence bars with light but serviceable gates.

HAULING OUT MANURE.

Get out all the manure intended for the corn crop at as early a period as possible. Do not spread it at once—but throw it into a pile in the centre of the field to be planted in corn, and protect it from leaching and evaporation by a covering of soil.

COMPOST FOR SANDY SOILS.

A good compost for a sandy soil can be formed by mixing together 15 two horse loads of swamp muck, 20 bushels of wood ashes, 5 bushels of crushed bones, 2 bushels of salt, and 1 bushel of plaster.

RENOVATING ORCHARDS.

Scrape the moss and scaly bark from the trees.—Apply to the trunks and larger limbs a mixture composed of one gallon of soft soap, 1 lb. flour of sulphur, and one quart of salt. Top dress the entire orchard with the compost last mentioned, but adding 10 bushels of lime and 5 bushels of crushed bones. Plough this lightly in. Dig round the trunks of the trees and cut out all dead wood and water shoots.

CARE OF STOCK.

Animals of all kinds demand extra attention during this trying month.

WINTER SEEDED GRAIN.

If you have any fields of wheat that have been partially winter killed, harrow lightly, top dress with well rotted manure and roll. The remedy is an imperfect one but it will be found to be the best that can be resorted to under the circumstances.

IMPLEMENTS AND TOOLS.

We need scarcely say that every implement, tool and machine upon a farm should be of the very best description, and in the very best condition. Such as are not so should be at once examined, thrown aside if comparatively worthless, and repaired if otherwise.

OUT HOUSES AND GARDEN FENCES.

Colour wash all out houses and garden fences, and see that the former are thoroughly cleansed and purified.

HIDE BOUND MEADOWS.

Harrow and cross harrow such meadows as are either hide bound or whose grasses are beginning to run out. Top dress them with a mixture composed of 10 bushels of unleached ashes, 2 bushels of bone dust, or 200 lbs. Phosphatic Guano. The above will be found sufficient for one acre. After thoroughly harrowing the land sow the mixture broadcast. Harrow once again carefully, and finish off with the roller.

Garden Work for March.

It is useless at this late date to discuss the value of a good vegetable garden to all persons residing in the rural districts, or the advantage of having those vegetables in ample supply and variety as early as possible in the season. We incline to the opinion that wherever this duty is neglected, it originates from a carelessness and want of forethought that is wholly inexcusable. There is no possible demand for labour on the farm which should supersede the proper and timely cultivation of the garden. An hour or two daily before breakfast, or a single day in each week will suffice for this purpose, and where there are many hands on a place, not more than one or two need be employed in this special but most essential service. We see no reason whatever why farmers by the simple use of inexpensive hot beds and a little extra care and attention should not have vegetables on their tables as early as they are brought to market by gardeners from the surrounding districts. What work requires to be done in the garden we now proceed to indicate.

Cabbage and other Plants.—Plants growing in hot beds now require special care. The frames should be raised a few inches every fair day to increase the hardness of the plants and to prepare them for planting out in the open air. They will require frequent watering after sunset, and it is better to do this with tepid water. If the heat declines too rapidly the frames should be lined with fresh stable manure.

Sowing Seeds.—As soon as the season is sufficiently advanced prepare a part of a warm and well protected border facing the south; manure it liberally, spade it deep, and pulverize the soil very fine.—When this is done sow in beds divided off for that purpose, Cabbage seed of various kinds—and also those of the Tomato, Egg Plant and Lettuce.—Where Cauliflower and Brocoli are cultivated the seeds of these delicious vegetables should also be sown at the same time. If the weather proves subsequently cold and variable, protect the seed beds with a covering of brush or of light litter. Water occasionally, if the season should be a dry one.

Asparagus.—If new asparagus beds are wanted, prepare a sufficient space along one of the borders of the garden where it is most convenient to have it for permanent occupation. Trench the ground well, manure it highly, raking until the soil is perfectly fine. When this has been done sow the seed in drills, 10 inches apart, and 1 inch deep, pressing down the drills with the back of the spade after covering the seed. By far the better plan however, is to purchase of a nurseryman a good supply of asparagus roots and plant them carefully in soil prepared as above but at not less than from 12 to 18

inches apart each way. In setting the plants spread the roots out horizontally and be careful not to break them.

Green Peas.—As soon as the frost is out of the ground and the soil is in good working order, put in a few rows of the earliest varieties of peas and repeat the seeding at intervals of ten days for succession.

Beans.—A few rows of these may also be seeded as early as the absence of frost will admit it to be done.

Lettuce Plants in hot beds.—If these are large enough for transplanting set them out in the open air for heading as soon as the weather will admit.

Radishes.—Sow radish seed in a warm border for early use, and continue to seed at intervals of a week for successive crops.

Early Turnips.—If it is thought desirable to have a supply of early turnips for table use, prepare a bed by manuring it with well-rotted manure, to which may be added, with decided advantage, a small quantity of bone dust. Spade the soil deeply, rake well, and sow early Dutch Turnip seed. When the plants first come up dust them with a mixture composed of 5 parts soot and 1 part flour of sulphur. Repeat this every morning until the plants are in the rough leaf. When the plants begin to bulb thin them out to 10 inches apart, and keep the soil light and clear of weeds.

Onions.—A good crop of onions can only be raised on a soil that has previously been made very rich. The manure used should be well rotted and must be incorporated with the soil to at least the depth of a foot. After this make the bed fine and lay off the rows 1 foot apart and 1 inch in depth. Drill in the seed thinly, cover and press down the soil with the back of the spade. When the plants are well up thin them out to 4 inches apart in the rows. Keep the bed clean, but do not cover or disturb the bulbs.

Celery.—As early in the Spring as the soil can be safely worked manure a border bed, dig in the manure, rake fine, and sow celery seeds in drills 12 inches apart and 1 inch deep—cover and beat lightly down the soil along the course of the drills.

Early Potatoes.—A bed of these should be planted at the beginning of the month, if possible. For the preparation and mode of culture see Farm work.

Rhubarb or Pie Plant.—Prepare a bed and sow the seeds of Rhubarb or Pie Plant; or better still, purchase the roots of the Giant Rhubarb and plant them at four feet apart, in rich and well prepared ground. A dozen plants will be sufficient for a moderate sized family.

Curled Kale.—Towards the latter part of March sow seed in a seed bed, to raise plants for setting out when ready.

Carrots, Parsnips and Beets.—The seed of these

valuable vegetables should be sown as soon as the absence of frost will permit, and the soil has been prepared to receive them. The beds should be made very rich; the drills for carrots and parsnips should be twelve inches apart, and the plants after they attain to a sufficient size should be thinned out to from 5 to 6 inches apart in the rows. Beets should also be seeded in drills but the latter should be 18 inches apart, the plants standing, when thinned out, not less than from 6 to 8 inches in the rows. For Beets, in addition to the usual supply of well rotted manure, a sprinkling of salt broadcasted will be found peculiarly beneficial.

Leeks, Garlic, &c.—These should be set out as soon as the frost is out of the ground.

Gooseberries, Currants and Raspberries.—Trim these, dig in a little well rotted manure or guano about the roots, rake the ground and top-dress with a mixture of 3 parts ashes and 1 part bone dust.

Garden Fruit Trees.—Treat these as advised in Farm work.

Strawberry Beds.—Clear off the beds—dig in with a fork some very old well-rotted manure, or, better still, woods mould—sprinkle ashes over the bed and cover the alleys between the rows with straw—water freely of an evening, whether the plants are in blossom or not.

GOOD TILLAGE IS MANURE.—“We must, more than ever before, realize the fact that ‘tillage is manure’—that the literal meaning of the word ‘manure’ (manus, hand, and ouvrier, to work,) is hand-labor. To manure the land is to hoe, to dig, to stir the soil, to expose it to the atmosphere, to plow, to harrow, to cultivate. The ancient Romans made *Stercutius* a god because he discovered that the droppings of animals had the same effect in enriching the soil as to hoe it. We can leave the modern method of manuring land to our western farmers, while we go back to the original method of stirring the soil. Mr. Lawes has raised a good crop of wheat *every season* for more than twenty years on the same land by simply keeping it thoroughly clean by two plowings in the fall and by hoeing the wheat in spring by hand. The Rev. S. Smith, of Lois-Weedon, has for years raised successive crops of wheat by a process of trenching the land with a fork and by hand-hoeing. We do not advocate this system, but the principle is applicable to our case. We can manure our land by better tillage.”—*Genesee Farmer*.

CONTENTMENT.—It is no small commendation to manage a little well. He is a good wagoner who can turn in a little room. To live well in abundance is the praise of the estate, not of the person. I will study more to give a good account of my little, than how to make it more.—*Bishop Hall*.

CONCENTRATED FARMING.

We cordially commend the following article from the Country Gentleman, to the attention of our readers. It treats upon a subject which we ourselves, in various ways and in more than one periodical, have frequently discussed. At the present time, from the scarcity of labour in the rural districts, the question of limiting the area of cultivation and of increasing the fertility of the soil within the boundaries so restricted, presses home upon every one. It is moreover of general application, and touches so pointedly the very serious matter of the aggregate amount of production in the future that in all the older settled States, its importance cannot be overrated. In the border States, where the labor system is, at this time, undergoing a radical change, and where the want of skilled farm hands is destined, for some years to come, to be most severely felt, the old mode of cultivating large tracts of land and of making up for deficiencies in the acreable product by extent of cultivation, must be abandoned for a concentration of manures and fertilizers, in accordance with the fewer hands employed :

Our readers are familiar with the arguments which have appeared in our columns during the past two or three years, relative to the comparative advantages of large and small farms. The result may be briefly summed up by saying that a farm is too large (if only twenty acres,) when there is not enough surplus capital to give it the very best management; and not too large, even if containing a thousand acres, if the owner is able to raise maximum crops, and to conduct every part as well as the most perfect small farm. The prevalent error is the attempt to spread over much land with little means. If every one could be satisfied that he may be an extensive farmer on but a few acres, there would be less running in debt for land, and less imperfect, weedy, superficial cultivation.

There are several advantages in raising heavy crops on a limited amount of land, and several disadvantages in raising the same amount on a more extended area. It is easier to obtain eighty bushels of corn from an acre of the best land, than the same amount from four acres of poor and badly cultivated ground—the plowing and general management of the good land being about as easy per acre as the other, or only one-fourth the expense per bushel. The distance of drawing manure, drawing in crops, driving cattle to pasture, and every other operation, are much lessened on the small and well managed farm. On the whole, it is much more economical to buy land at double price that will produce double crops, or better to expend as much more as the cost of the land in under-draining

and manuring, if, as frequently happens, the productive power of the soil may be doubled.

Farmers are often not aware of the amount which a moderate farm may be made to yield in the best condition and under the best management. We propose therefore, to take as an example fifty acres, allot it to different crops, assign to each an acreable product, not greater than the average amount obtained by the best farmers, and thus show what may be the result.

While the average corn crop is not over 40 bushels, there are many who obtain seventy and upwards as a yearly average. While wheat usually yields only fifteen or twenty bushels, such good farmers as John Johnston have obtained an average of thirty or more. While many landowners cut scarcely a ton of hay per acre, such men as Major Dickinson raise an average of three tons. If the hay crop is trippled, the amount of pasturage will be increased in like proportion. Many cultivators who attempt to raise carrots and other roots, often fail by planting late or on hard and cloddy ground, or by neglecting weeds, and when they succeed get only two or three hundred bushels per acre; others, by a good previous preparation and by proper cultivation, confidently rely on at least eight hundred bushels per acre.

Now having premised these admitted facts, let us see what the fifty acres may be made to yield :

10 acres meadow, 30 tons,	\$240
10 do. pasture, 15 cattle five months, say \$2 per month, 150	
10 do. wheat, 30 bushels per acre,	450
10 do. corn, 70 bushels, at 75 cents, fodder \$3 per acre, 555	
2 do. corn fodder in drills, five tons per acre,	60
2 do. carrots, 800 bushels per acre, 15 cents per bushel, 240	
1 acre ruta bagas, 600 bushels, 16 cents per bushel, ..	96
5 acres winter apples, 200 bush. per acre, 25 cts. per bu. 250	
	\$2,041

Several other crops could have been added, giving greater variety, but the above will answer as a specimen of what may be raised. The market values of the products will vary with localities, as well as with the mode of marketing; for example, the corn as fed to animals by some farmers, would yield a less value, while with others the value would be considerably increased, as, for example, by the mode of manufacturing pork described by N. G. Morgan in the Illustrated Annual Register for the present year, by which he uniformly obtains a dollar a bushel when pork is selling at five cents per pound. The improved condition of domestic animals, the increase in the richness of milk and butter, &c., caused by feeding carrots in connection with dry fodder, would doubtless give more value to these roots than stated above. Only five bushels per tree are estimated from the apple orchard, a much smaller amount than the average of the most productive sorts under the best management. The

crop of carrots is large, but a larger yield has been obtained on an inverted, rich clover sod, manured well the previous autumn, plowed early the following spring, in connection with subsoiling, and started a fortnight before common corn planting. On the whole, we think it will be safe to estimate a product of \$2,000 for the fifty acres, arranged in such a mixed course as would be adapted to a good rotation. As already premised, the land must be in the very best condition to accomplish this result—well under-drained, full of vegetable matter from the roots of previous crops well supplied with the manure from the animals which such crops would sustain, and the whole under energetic and seasonable management. It is obvious that the net profits of such a farm would be much greater than from the same amount of crops raised, as is commonly the case, on 200 acres; those who have been accustomed to such products as the latter, will, of course, be incredulous as to the amount which may thus be obtained, but as before stated, the thing has been already done, and exceeded in numerous instances.

And yet there are many land-owners in the most fertile districts, who would be quite unwilling to be pent up on a fifty-acre farm; forgetting that they could clear more than a thousand dollars every year from its surface. We know a small farmer, who occupies only eleven acres, and yet sells from it a yearly average of \$200, besides the amount consumed by his family. One year he sold \$300 worth; this is a larger amount than we indicated in the preceding estimate.

A large farm has some important advantages over a small one, especially in the facilities for using expensive farm machinery. But what we wish particularly to urge, is to farm extensively as possible on the given number of acres occupied by the owner. For example, he would be the more extensive farmer who should raise \$4,000 from 100 acres, than he who should raise \$3,000 from 300 acres. The former is the kind of large farming we wish to see introduced, even if the owner possesses a domain of a thousand acres and upwards. It has many advantages; among which are, the less amount of traveling to go from one field to another; the shorter distance passed by teams in manuring, plowing, and drawing in crops; the comparative ease with which such a farm may be superintended, and consequently, the greater perfection of that superintendence; and lastly, and by no means the least, the increased compactness of neighbourhoods, virtually shortening public highways, and bringing all markets nearer to hand; for if the crops of a large region of country are doubled, the villages and towns, and all the facilities connected with them, will also be doubled, or to speak otherwise, all these facilities and conveniences will be brought within one-half the distance to every farmer.

PHYSICAL CONDITION OF THE SOIL.

BY WILLIAM BRIGHT, LOGAN NURSERY, PHILADELPHIA.

Too little attention is given by farmers, gardeners, and amateur cultivators of all classes, to the physical condition of the soil. Every body is hunting after manures and special fertilizers, but few think enough of the great advantage to be derived from a proper plowing and cultivation of the soil. It has been recently proved by careful experiments made in England, that deep plowing, and thorough cultivation, is fully equal to free manuring, even in poor or exhausted soils. One class of Chemists tell us that there is mineral matter enough in all soils to meet the wants of crops for a hundred years, if this mineral matter could be rendered soluble and fit for the food of plants. Another class of Chemists tell us that if you have mineral matter in proportion in the soil, plants can assimilate carbonic acid and ammonia enough from the atmosphere and rain to stimulate them to the highest degree of perfection. Now we know, as a practical fact, that when soil is constantly stirred, and the particles of matter are frequently thrown into new relations to each other, chemical action takes place more rapidly than when the particles remain for a long time in one position; and hence, much soluble mineral matter is produced by this chemical action or process of decomposition. Thus a barren soil may be rendered fertile, simply by deep and thorough plowing and cultivation with the roller, harrow, and other implements. It may require a little time after such plowing and cultivation, for the chemical processes to become perfected, but a good result must follow such practice.

But soil must not alone be plowed, rolled and harrowed, to disturb the relation of particles. It must also be shaded from the direct rays of the sun, to produce the best effects. To this end it will be highly useful in all efforts to improve a poor soil, instead of leaving it fallen and uncovered, either to mulch it all over during the summer with long litter, or to sow it with some plant which shall not only shade it but promote the decomposition going on in the field by the influence of its roots, and furnish a mass of green vegetable matter for after mulching or turning under. Decomposition of soil can only go on when it is moist, warm, and shaded. Light, dryness, and cold, all tend to prevent decomposition. Clover is, beyond all question, the best green crop that can be grown for improving exhausted soils. But sometimes soil is so poor that clover will not grow successfully, and in such cases resort must be had to corn sowed broad-cast, or the southern field pea, or the little soup pea of Jersey and Delaware, which will grow, without manure, on blowy sand, and produce several tons of green matter per acre.

Soil in its most perfect state should be wrought into a condition of the most minute divisions of particles; it should be light and porous, and of a friable character, free from lumps and sodden masses; dry, yet moist; sweet, but not strongly alkaline; and so supplied with sand, or other opening substance, that will not bake upon the surface.

And here we come to the main point of this article, which is to warn all young cultivators of the soil not to work it, or to tramp it, or run horses or carts over it when wet or frosty but not frozen. More harm is done in this country, by the careless working of the soil when wet and sticky than can be repaired by the best cultivation and the most expensive manuring. To the young farmer and gardener we say *strongly* and *earnestly*, never work your soil or allow your men or carts to run over it when it is wet and mucky. No matter how backward may be the season, *wait, wait* till the soil is in a condition to be worked before you attempt to plow it, or put in your seed. The whole advantage of plowing is destroyed by "bunting up" the soil in wet weather. You may break up the old lumps of soil, but for every lump so broken you create a dozen balls of earth as hard as a mass of mortar, which years of after culture will scarcely reduce to a state of fine divisions suitable for the resting place of plants. Work your soil freely and constantly in fine, dry weather, when not too windy, and you will be richly repaid for improving the physical and mechanical condition of your land; but beware how you touch it, or tread upon it even, when wet and pasty. We know no error so fatal to good farming or gardening as this of working wet and half-frosted soil.

POTATO CULTURE IN MAINE.

It has been proved that manuring with barn yard manure as we used to before the advent of the rot, tends to promote that disease, probable because it renders the stalks more succulent and tender, so that the seed, or spores of the fungus which constitutes that disease, find it easier to effect a lodgement, can penetrate easier and find more nourishment. We have found that a moderate dressing of barn-yard composted manure, spread and harrowed in, with an application of some of the modern fertilizers in the hill, secures a crop of excellent quality if it does not give so many bushels as a full, old-fashioned dressing of animal manure used to. Guano, is good, but costly. Phosphate of lime is good, and not quite so expensive as guano. Among the many fertilizers recommended we think highly of sea rock weed and muck. The muck we would compost with salt and lime, and place it in the hill, and the rock weed we would put in with this. We prefer it in the ground or pulverized condition as prepared

by our friend A. Johnston, Esq. of Wiscasset, whose experiments in the preparation of this material, so as to render it portable, as well as applicable to any kind of crops, deserves the attention of farmers throughout the State. Some experiments with it in various ways last summer induce us to form a very favorable opinion of it thus prepared.

We would refer to the statement of Mr. Pratt, member of our Board of Agriculture, made by him before the Board, and published in our report of its doings last week. It will there be seen that he found the use of this prepared rock weed dressing valuable for the potato crop.

Another point to be considered in this culture, especially in the present scarcity of labor, is the best way to plant, hoe, and harvest. Although all of these labors as applied to potatoes are generally considered as among the roughest and coarsest of farm operations it is nevertheless true that this crop feels and manifests the good effects of careful manipulation in its culture.

It may not be out of place to mention here, that we have recently examined a machine for planting potatoes, invented by Joseph L. True, a young man of Garland, in this State, which we think will be a very valuable labor saving implement for this purpose. It cuts the potato, makes the furrow, drops the pieces regularly and at given distances in it, and then covers them up as it moves along. A man and a horse will plant, say six acres per day as our land is generally prepared, and more in proportion to the smoother condition of the field.

In regard to hoeing, the different kind of horse hoes come into play very well for this purpose, but we have found a light double mould board horse plow as good as anything. The weeds between the rows are thereby rooted up, and the potatoes hilled up at the same operation.

As to digging, or gathering the crop the old way of doing it with hand and hoe, basket and boy, is most common yet. There have been several machines patented, called "potato diggers," but we never seen them work, and can therefore say nothing of their merits or demerits. Whatever these may be, we have no doubt we shall ere long hear that the exuberant brain of some live Yankee has produced one that will dig, pick up and sort out into sizes, and load up at one operation all by horse or ox power. Potatery by machinery will then become a pleasant, productive and profitable business in Maine.—*Maine Farmer.*

When chipping wrought-iron the chisel should be dipped in greasy waste, occasionally; the labor is much reduced thereby.

Don't strike finished work with a hammer, take a piece of hard wood instead.

FARM IMPLEMENTS & MACHINERY.

NO TWO.

PLOUGHING WITH THREE HORSES.

The principles of draught clearly point out that which farmers have long since observed in practice, that a horse will exert much more force when placed near the plough, sled, or vehicle to be drawn, than can be used when a long draught-chain places the team more remote. An experienced stage proprietor has given it as his opinion, that three horses placed abreast will draw his vehicle as well as four with two leaders in advance in the usual way. My own experiments in ploughing have led me nearly to the same conclusion. The mode of constructing the whiffletrees for this purpose is familiar to most farmers; but as the right-hand horse walking in the furrow necessarily places the other two so far to the left as to create a new centre of draught, a special contrivance is necessary to enable a common plough to run as with two horses. A good way adopted, by some plough manufacturers, is to place an iron arc between the handles, to which the rear end of the beam is screwed, and along which arc it is capable of being moved, until the right centre of draft is attained. Another way is to construct a clevis bent several inches to the left side of the beam.

Three horses are driven by the ploughman with the same facility as a two-horse team, and do not require an additional driver, as becomes necessary with four. As a deeper cultivation would improve the character of farming, in all places where the character of the soil properly admits it, there is no doubt that the general adoption of the three-horse system would become a considerable agent in improved agriculture.

STEAM PLOUGHS.

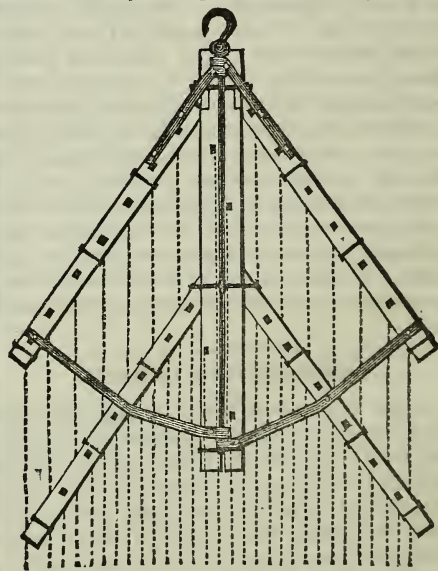
The difficulties in the way of the introduction of these are formidable, and, for the circumstances of the farmers of this country, it is feared they will not be soon overcome, unless on level land free from stone. 1. If the engine is used as a locomotive for drawing the plough or the gang, its weight is necessarily such as to sink it into any good soft soil, unless the wheels are made very broad and of great diameter, which adds to the already formidable weight. The engine and its gang become quite a complex machine, and the uneven surface and occasional obstructions tend to injure and derange the parts. The friction caused by the soft and yielding surface of the ground is another formidable difficulty. Careful experiments, made with the dynamometer, have established the fact that it requires eleven times the force to draw a heavy load over a common hard road as on a smooth railroad; and on a

new unpacked gravel road the disparity is as thirty-five to one. Taking the new gravel road as a standard representing the soil of a field, (although the latter is often much the softer,) the loss occasioned by this resistance to the engine would be thirty-five times as great as the same loss on iron rails.

2. The only practical success which has attended steam ploughing has been by the use of fixed engines, working the plough by means of wire cables. In England, where iron machinery, coal, and labor are cheap, it has been performed at an actual expense of two dollars per acre. In this country it would, probably, cost at least three dollars, and require a heavy expenditure of capital in machinery and engineer's wages. Ploughing by horse labor, as now performed in this country, is much cheaper.

HARROWS.

The importance of fine pulverization of soil is not sufficiently appreciated. Where the fine, delicate, threadlike fibres of the roots of any crop have to make their way through a hard and dry mass of



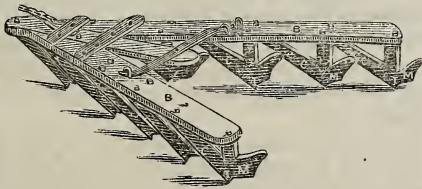
THE GEDDES HARROW.

baked earth, or at best among coarse broken clods, they must grow and receive nourishment at an immense disadvantage when compared with the extension of the same roots through a finely pulverized, soft, and moist bed of earth, permitting and favoring their free ramification in all directions. Every good implement, therefore, for effecting such pulverization becomes a most important assistant to the successful agriculturist. The fine and thorough intermixture of manure with soils, at the time of their application, especially if in the spring, contributes almost incredibly to their efficiency; and in

accomplishing this desirable end a free use of the harrow in breaking it fine and working it by repeated passages into the mellow soil, should never be omitted before the plough turns it under. Harrows should be modified in their construction according to the nature of the soil. Where it is free from stones and other obstructions the teeth should be small and numerous—about three-fourths of an inch square, to each harrow. These will pulverize the soil more perfectly than a few coarse teeth, and leave a fine level surface. Where there are roots, stones, and other obstructions, the teeth are to be fewer and larger. The teeth will pass through the earth more freely and be more efficient if the corner or angles, and not the flat sides, are placed foremost. For very hard soils efficient harrows are made by using flat, sharp-edged steel teeth.

Among the many harrows in use in our section of country the Geddes Harrow is most generally approved. It is considered superior to the square harrow, inasmuch as it draws from a centre, without an uneasy and struggling motion, and is of course easier for the team. The accompanying cut is simple and distinct, and needs no other description.—Being hung by hinges, it is easily lifted when in motion, to let off collections of weeds, roots, or other obstructions. It can be doubled back, and is of very convenient form to be carried in a wagon about the farm.

For pulverizing the upper surface of the inverted green sward, nothing, in the opinion of many, is equal to SHEAR'S Harrow, or others constructed on a



similar principle. The teeth being sharp, flat blades, cut with great efficiency, and as they slope backward like a sled-runner, they pass over and press down the sod at the same time that they slice off its upper face and reduce it to fine powder. A single passing will give a mellow surface more than twice as deep as the common harrow, operating at the same time as a roller to keep the grassy part down in its place.

DRILLING AND SOWING MACHINES.

The rapidity and precision with which small seeds are distributed and covered by the use of seed-drills renders them absolutely necessary to the successful raising of such crops as carrots, turnips, beets, &c. in fields. The prescribed limits of this short article preclude even a notice of the different good machines now in market and use. The general prin-

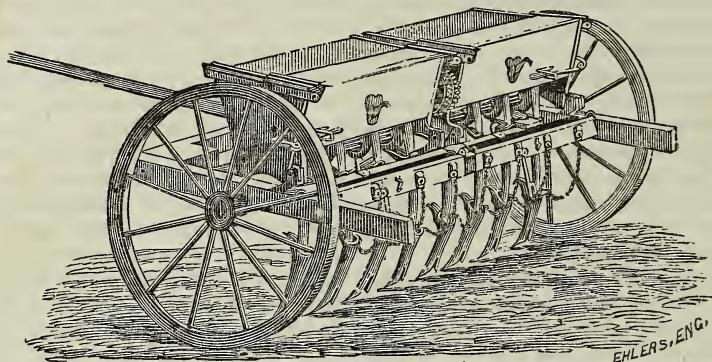
ciples on which they operate, the regular and measured distribution of the seeds, by means of revolving cylinders furnished with small cavities, or by the vibratory motion of perforated plates and the passage of the seed down into the mellow earth through a hollow coulter, where it is immediately buried by the earth falling back upon it as soon as the coulter has passed—these principles of construction are adopted in all, and are familiar to all who use them. But there is one requisite for success that has been too much overlooked—the proper adjustment of depth for the seed. If too shallow, the seeds will not vegetate; if too deep, they will be smothered. Except, however, in times of considerable drought, the depth is usually too great. I have known beet seeds to fail entirely when planted three inches deep, and the seedsman denounced for selling bad seeds; but afterwards, when planted from the same package only an inch in depth, they grew profusely. The failure from drought rarely occurs to such seeds if planted early enough in the season. Some variation must be made with the nature of the soil. Seeds may be placed deeper in a light gravelly soil than in a strong, heavy one. No better investment of a few day's time and labor could be made by any farmer than in a few experiments under varying circumstances to determine the best depth for setting his seed-drills. There is no question that much of the objection that has been made to the use of the wheat-drill has arisen from too deep planting. The writer of these remarks made a few experiments the present year on a light loam to determine this question, the planting being done in the spring of the year, when the soil was more moist than it frequently is at the time of sowing winter wheat.

Wheat planted half an inch deep came up in five days, and an inch deep in six days. Six weeks afterwards there was no perceptible difference in the appearance of the plants. That planted two inches deep came up in seven days, and at six weeks did not appear quite so good. The time for coming up continued to lengthen, and the quality of the crop to decrease, until, at a depth of six inches, very few slender stalks appeared. It is easy to understand from this experiment that a farmer may fail in his drilled crop with the seeds buried too deep, when more shallow but imperfect covering of the harrow would result in success. It is obvious, however, that a drilling-machine properly set would be the best, as all would be buried at a certain depth, and not in the irregular manner performed by the harrow. Hence it has been found that a difference of five bushels per acre in the crop in favor of drilled field, when the work was properly done, has not been unusual. It should not be overlooked that a dry, coarsely pulverized soil may afford air to the

buried seeds at a depth twice as great as a fine, compact soil, and the farmer must, therefore, exercise some discretion and judgment, in which the occasional performance of experiments would greatly assist him.

Experiments performed at the same time with

afterwards; but the others were feeble as the depth increased. The results with oats were about the same as with corn, all beyond two inches in depth being of feeble growth. In beans, the effect of deep burying was more fatal. Those plants one-half, three-fourths, and one inch deep did not mate-



OLD DOMINION SEED DRILL.

corn, oats, and beans, gave similar results. Nearly all the grains of corn grew, to a depth of six inches, and those varying from half an inch to two inches in depth presented no material difference five weeks

rially vary. At two inches depth there was a marked difference; few came up at three inches; very few at four; and none at all at greater depths.

Cultivators, Mowers and Reapers, in our next.

THE UTILITY OF INVENTORS TO MANKIND.

The following, on the utility of Inventors, we copy from the *Scientific American*:

When Fulton first moved away from the dock with the *Clermont*, the skeptical crowd who watched his success doubted the evidence of their own eyes. but at length broke out in unrestrained applause at his triumph; which in that age of the arts and sciences was great indeed. From that day until the present time the efforts of mankind have been put forth to accomplish the hard work of the world by sinews that never tire. Apt indeed are the automatons which now clothe the naked, feed the hungry, shelter the houseless, and whirl the traveler at a giddy speed over plains or seas. All the steam engines have been perfected only by patient effort, mental and bodily; all the looms run themselves, so to speak, only by reason of the intelligent and untiring exertions made by practical men; and cheap clothing, cheap traveling, cheap food, cheap everything, in fact, results from the introduction of useful machines.

Inventors have been, and still are busy; let them be still more active. Fame writes the names of successful ones high up on her scroll, and the cause of humanity, of mercy, of all virtues and qualities, is aided and countenanced by the art of invention. As witness the safety lamp of Sir Humphrey Davy, and the circulation of the blood by Jenner; for this lat-

ter, although more properly a discovery, was yet the result of patient thought and investigation. In more modern times the name of Morse, as connected with the telegraph; of Parrott, associated with his rifled ordnance; of Timbey as the originator, and Ericson as the practical developer of the system of iron-clad batteries, will all be gratefully remembered by posterity as men who by their talent, energy, and patriotism, achieved great results for the nation.

With such a record before him, let no aspiring young man waste time and money on perpetual motions or other whirligigs, which are to the art of useful invention what the philosopher's stone is to chemistry—the shadowy and illusive thing that evades every attempt to grasp it, and ends only in sorrow and inexpressible misery to all concerned. Take hold of realities, oh, ye who aspire to wealth and honor! Grasp not the wind, but seize upon some arduous task now performed by manual labor, and reduce it to the sphere of machinery. Wrestle with possibilities, not intangible things; and fame and fortune, which now seem afar off, shall come at your nod and beck, as the slaves of old obeyed the rubbing of Aladdin's ring.

Some of the English peasantry took the recent earthquake for a sign that the world was coming to an end, and packed up to emigrate to America, to avoid the calamity.

Live Stock Register.

GREASE, OR SCRATCHES ON HORSES.

Scratches, as this disease is commonly called in New England, is not dangerous, or difficult to cure, unless neglected by the grossest carelessness and abuse. It is occasioned, sometimes, by cutting the hair from, and thereby exposing the hinder heels to the operation of cold and wet. In winter when the legs most require warmth and protection, the heels are deprived of the covering which nature intended should protect them, and parts where the blood flows most tardily are laid bare to the effects of evaporation and frost.

Turning out to grass, especially during the colder months, when the wet is particularly abundant, and the bite short, is another fruitful source of this affection. Allowing the mud to remain on the parts after the horse is returned to the stable, and a general neglect to keep the feet and legs clean, is, perhaps, the chief cause of this painful disease.

The earliest symptoms of "grease" is the cracking of the skin of the fetlock, very much as the hands become "chopped" in cold weather. The legs then swell, accompanied by more or less fever. If the hair should be examined, it will be discovered loaded with scurf about the roots, while one foot will be frequently seen employed to scratch the back of the opposite leg. At the same time, the part begins to exude a thick, unctuous moisture, from which the disease derives its name. This hangs upon the hairs of the heel in heavy drops. It is an offensive secretion.

Should no regard be now bestowed upon the sufferer, and the horse worked on despite the lameness, the skin swells, white cracks, deep and wide, appear upon the inflamed integument, the lines of division ulcerate, sometimes very badly, and a thin, discolored and unhealthy pus mingles with the discharge.

The remedy for this disease is simple enough, but the *preventive*, cleanliness, is still more easy. Wash the parts in warm suds of castile soap, rub them with some soft, fresh oil, with the fingers, and keep the horse warm and quiet.

Mayhew, in his excellent work, "*The Illustrated Horse Doctor*," recommends the following, to be used three times each day, viz:

Lotion for the Earliest Stages of Grease.

Animal glycerin.....	half a pint.
Chloride of zinc.....	half an ounce.
Water.....	six quarts.

Lotion for the Ulcerative Stage of Grease.

Chloride of zinc.....	one ounce.
Creasote.....	four ounces.
Strong solution of white oak bark.....	one gallon.

But, we urge again, a humane care of the animal

—when this is observed, the disease will never appear.—*N. E. Farmer.*

FEEDING CALVES.—A friend of ours who has great success in raising calves on skimmed milk and "corn pudding," says the Genesee Farmer, adopts the following method:—He never lets the calf suck the cow, but teaches it to drink out of a pail. When the calf is three or four days old, he takes about a teacupful of corn meal and pours a pint of hot water over it, stirs it up and lets it scald for a few minutes. He then pours on three or four quarts of skimmed milk, or as much as the calf will drink. — In the meantime he has had a piece of iron heating in the stove. When red hot he stirs the milk with it. This "scorching the milk" he considers of the greatest importance when calves are fed on skimmed milk. It prevents it from scouring the calves. As the calf grows older he increases the quantity of corn meal. The skimmed milk, at first, is only 12 hours from milking, but when the calf is older the milk may be allowed to stand twenty-four or thirty six hours before it is skimmed.

TREATMENT OF KICKING COWS.—A correspondent to the *Agriculturist* says: "The following treatment, which I have tried for some years, has never failed to stop the evil. Put a strap round the cow, just in front of the bag, and buckle it rather tight. If the cow tries to kick, draw the strap a little tighter. She will never get use to it, and it never does any injury. She will keep on eating as usual, but has no inclination to lift her feet, even to walk about." This may answer the purpose; the experiment is easily tried.

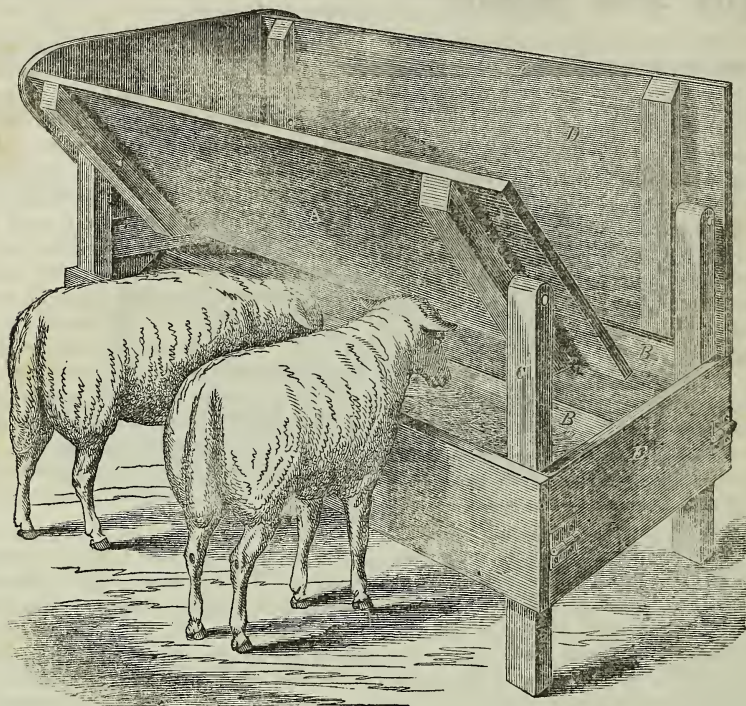
In witness whereof we hereby testify to having tried the above, successfully, years ago, upon a three-year-old heifer. It is a sure "pop" every time.—*Ed. N. H. Journal of Agriculture.*

We tried it this fall upon a two-year-old heifer, and it worked like a charm.—*Ed. Plowman.*

CORN AND ROOTS FOR FATTENING HOGS.—In feeding dry corn, to fattening hogs, says a correspondent to the *Albany Cultivator*, I have found the most beneficial results from giving one or two feeds a day of roots,—turnips or sugar beets. It serves them in the place of water, renders the corn less heating, and fed in this way a bushel of roots are fully equivalent for fattening to a bushel of corn fed alone.

SORGHUM FOR FORAGE.—P. B. S., of Huron Co., Ohio, writes on this subject:—"I learned one fact of value connected with the growing of sugar cane, viz., that cane fodder cut before frosted, and cured properly, is far superior to corn fodder, for winter feed for horses,—and the amount per acre exceeds any other kind of fodder grown."—*Rural New Yorker.*

HALE'S IMPROVED SHEEP RACK.



This apparatus is intended to economise feed and to obtain the greatest benefit from it by preventing the sheep from having access to the fodder except at proper times; it is also adapted to other purposes, being capable of conversion into a shearing table, and as a weather-proof salting house, or shed in the summer or mild seasons. The engraving represents one side, A, of the rack turned in, disclosing the feeding-troughs, B, and the internal arrangement of the rack or box, more properly speaking. These feeders, A, are swung on pivots in the upright bar, C, and when in the position indicated in the engraving on the side where the sheep are feeding, permit them to have access to the fodder at all times.—When roots or fine feed are used in the feed troughs, it is necessary to clean them out occasionally; and to do this the feeder boards, A, are turned up, as shown at D, and the attendant can then go inside and sweep out the troughs through the door, E, without being hindered or delayed by the crowding or desire of the sheep to get at the feed. The feeding boards can also be turned up in a horizontal position, so that by merely placing a bar underneath the two leaves, when so turned up, a table is made which may be used for shearing on in the spring; or by partially inclining the sides in the form of a roof, and placing a ridge-piece over them, the salt,

which it is usual to supply the sheep with at certain seasons, can be thrown in the troughs instead of scattered around under foot and on rocks to be wasted; the inclination of the roof serves to keep off rain and dew, and is thus turned to good account in this respect. When desired, grain can be fed on one side and vegetables on the other, to different flocks feeding from the opposite sides, none of which can be wasted, or reached by those opposite. It can be made of any desirable length. Those interested in such an apparatus, can receive any information by addressing the inventor, Robert Hale, at Fitchburg, Mass.

HOW TO CATCH SHEEP.—Never seize them by the wool on the back. It hurts them exceedingly, and in some cases has been known to kill them, particularly in hot weather, when they are large and fat. The best way is to avoid the wool altogether. Accustom yourself to catch them by the hind leg, or, what is still better, by the neck, placing one hand under the jaws, and the other just back of the ears. By lifting up the head in this manner, a child may hold almost any sheep without danger to the animal or himself.

Happiness grows at our own firesides, and is not to be picked in a stranger's garden.

THE CRESTED OR POLISH FOWL.

The Crested or Polish Fowl has four sub-varieties—the Black, the White, the Golden Spangled, and the Silver Spangled. They are all distinguished by the crest or top-knot, which should be large, compact, and of good shape. The White and the Black have white caps. All have clean slate-colored legs or shanks. The hens of this family are good layers when young, seldom wanting to sit before three or four years old. The chickens are not as easily raised as the common fowl, and should be kept out of dews and showers. None bear confinement well, while all have white, tender flesh, of about medium quality. Weight from four to six pounds. The Polish, are considered as fancy birds, and not suitable for general use in the northern States—but ought to do well south of Pennsylvania and Ohio.



or six months old, and to them should we look for early layers.

It must be observed that during the moulting season, in the latter end of summer, or later in autumn, hens cease laying, and that many kinds, especially if old, do not commence until the ensuing spring. There is, however, in this, a great difference in different species, and with early reared pullets, under good management, eggs may be expected in November and throughout the winter.

WINTER MANAGEMENT OF HENS.

C. N. Bement, in speaking of the management of hens in winter, says: In order to have hens lay in winter, it is necessary to furnish them a dry room where the vicissitudes of the weather and storm will not reach them. Some have been so careful in this matter as to dig holes in the sides of steep banks and form rooms for them there, where they can have proper heat and always a supply of earth to wallow and bask in. These places are secured by glazed windows in front, facing the south or south-east, to admit sufficient light and heat from the sun.

Though hens should be kept warm and dry in winter, they should not be crowded together in small or contracted apartments, as, without ventilation, they are liable to disease from impure air.—In mild weather, when the ground is bare, they should be permitted to go out in the sun. They should be supplied with various condiments, such as broken oyster shells, lime in old mortar, broken bones and plenty of gravel. They should also have in addition to their grain, food such as cabbage, carrots chopped fine, and boiled potatoes, mashed and mixed with shorts or wheat bran, and given to them while *hot*, will be found beneficial.

The time for hens to lay eggs depends much upon the warmth in which they are kept, and, in general on the season. There are two seasons or periods of the year when hens lay most; these are spring and autumn. Cold retards or prevents this, hence the scarcity of eggs in winter. March pullets of the Asiatic breeds will often commence laying when five

POULTRY FOR BREEDING.

Common barn-yard fowls, without extra feed, do not reach their full size before they are about eighteen months old. While growing, no quadruped makes a good breeder, and the same is true of poultry. It is the opinion of our best poultry-breeders that the cocks and hens used for breeding should be the best of their kind—of large size, well formed, perfectly healthy, the cocks not to be related to the hens, and none of the hens to be less than two years of age; from that age to five; while an early-hatched cockerel might do the next season if he should be mated with only four or five hens, an older bird is generally preferred. To insure fecundation in eggs for sitting, it is advised never to put more than from six to eight hens with the male bird, and of the Shanghais and other very large fowls only about half as many. It is also better not to allow the cocks and hens kept for breeding to run together before the commencement of the breeding season.

To raise large fowls of any kind have the chickens hatched early in the season, feed often, and give a variety of nutritious food, until they get well started, and the more liberally the young are fed during the first season, if they always eat up all that is given them, the more satisfactory will be the result.

SACRED FLOWERS.

To the Benedictines and Cistercians—the first great agriculturists of Europe, and the first great gardeners, the true predecessors of the Hendersons, Veitchs, and Downings of our own day, we are indebted for many of the old well loved flowers that will always keep their places in spite of their gayer but less permanent modern rivals. The wall-flower that “scents the dewy air” about the ruined arches of its convent; and scarlet anemone, that flowers about Easter-tide, and is called in Palestine the “blood drops of Christ;” the blossoming almond tree, one of the symbols of the Virgin; and the marygold, that received her name, are but a few of the old friends brought long ago from Syria by some pilgrim monk, and spread from his garden over the whole of Europe. Within those quiet walls the brother Pacificus of his monastery found material for the studies of leaf, flower and insect with which to decorate the borders of his missals and breviaries; and the sculptor could there arrange his wreaths of white lilies; or his branches of “herb bennet” before transferring them in stone to the capitals of the neighbouring church:

Nor herb nor flowret glistened there

But was carved in the cloister arches as fair.”

In the cloister garden, too, the monk was wont to meditate on the marvels of the plant that surrounded him, and to find all manner of mysterious emblems in their marks and tracings. Many displayed the true figure of the cross. It might be seen in the centre of the red poppy; and there was a “zucca” (fig) at Rome, in the garden of the Cistercian convent of Santa Potentia, the fruit of which when cut through, showed a green cross inlaid on the white pulp, and having at its angles five seeds representing the five wounds. This mysterious fig is described and figured by Bosio, who compares it to the “*Crocefisso de la cepa*,” at Valladolid, a representation of our Lord on the cross, formed naturally, though “*mirabilmente*,” by the twisted growth of a vine root.

The banana, in the Canaries, is never cut with a knife, because it also exhibits a representation of the crucifixion, just as the fern root shows an oak tree. But the fame of the greatest of all such marvels arrived at Rome in the year 1609, whilst Bosio was laboring over his ponderous folio on the “Triumphs of the Cross;” and he pauses accordingly, half doubtful whether he ought to say anything about the “*stupendo e maraviglioso fiore*,” of which he had been told, seeing that it was a matter almost too “*maitruoso e straordinario*” for belief, but quite unwilling to omit all notice of it, especially as he was daily receiving new confirmation of its wonders. This “*maraviglioso fiore*” was the passion flower of the New World.

Drawings and descriptions of the passion flower were published for the first time, in both Spain and Italy, in 1609. Bosio’s chief authority was Father Emmanuello de Villegas, an Augustinian monk, and a native of Mexico, who was at this time visiting Rome. But Father Emmanuel’s wonderful account had been confirmed, we are assured, by many personages “*di qualita e di gravita*,” who had traveled in New Spain, and especially by certain Mexican Jesuits. It would seem, says Bosio, that in this wonderful and very mysterious “flower of the five wounds” (“*flor de las cinco llagas*”) as the Spaniards called it, the Creator of the world had chosen to represent the principal emblems of his Son’s passion; so that in due season it might assist, when its marvels should be explained to them, in the conversion of the heathen people in whose country it grew.

He goes on to describe the flower as follows: The upper petal are tawny (“*di color leonate*”) in Peru; in New Spain they are white, tinged with rose color. The fringe-like filaments above are blood red, as “though referring to the scourge with which our Lord was beaten.” In the midst of the flower rises a column to which he was bound; and above are the nails, both of a “clear green.” Above, again, is the crown of thorns, surrounded by a kind of veil of threads—seventy-two in number, the traditional number of the thorns on Our Lord’s crown—colored like a peacock’s feather (“*di color pavonazzo*.”) In the centre of the flower and under the column are five marks or spots of a blood color, “clearly representing the five chief wounds that Christ received on the cross.” The plant, he continues, is rich in leaves, which in shape resemble the iron of a pike or lance head, and refer to that with which our Lord’s side was pierced. At night-fall the flower closes entirely; and in the day it only half unfolds itself, keeping always in the form of a bell, so that the mysteries of wonderfully enclosed in it cannot be generally seen.

A LADY’S PLAN OF MAKING BUTTER IN WINTER.—

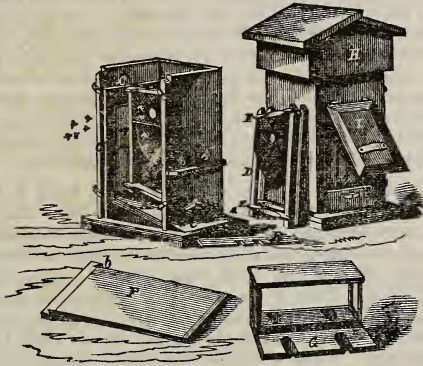
The cream is skimmed each day, and placed at once in a kettle, and the kettle put into hot water (to prevent scorching) and put over the fire. The cream is allowed to scald, without boiling. It is then put into a vessel and set aside; each day’s cream being in like manner scalded, and added to the mass, until enough for a churning is obtained. The churning is commenced immediately after adding the last day’s cream, which brings the whole to a proper temperature, without thinning by the addition of hot water.

It is the greatest possible misery to a man and to his children to be *homeless*; and many a man has a splendid house; but no home.

The Apiary

KING'S IMPROVED BEE-HIVE.

The culture of the honey-bee has engaged the attention of intelligent and enterprising men of all ages, yet within a few years, by the introduction of movable frames and other improvements for bee-



hives, old systems have been abandoned, former theories exploded, and bee-keeping rendered as certain and more remunerative, with less capital, than most other rural pursuits. The shape and construction of the old-fashioned hives were not suitable to the natural habits of the insects, and the difficulty in removing the frames, and liability of injuring the combs and bees, greatly impaired their utility. The hive which forms the subject of this illustration is believed to be free from these objections, besides possessing many other advantages which render it valuable. In the engraving the inclined bottom board, A, projects in front of the hive for the bees to alight on. By the use of the small slide, B, held in place by a button, the entrance can be regulated to any desired size; and by making the notches in the slide correspond with the pillars, C, the entrance is closed entirely. The side bars of the movable comb frames, D (seen resting against the hive), have their lower ends beveled outwardly to a point resting on the bottom board, causing the frame to incline into the hive. The projections, E, on the top and bottom bars of the frame accomplish the two-fold purpose of keeping the frames at the proper distance from each other, and from the walls of the hive. The object of having the frames touch only on their points and edges is to leave no place within the hive where moths may deposit their eggs which cannot be reached by the bees. The movable side, F, is inserted from above into the rabbets, a, and is held up by the mitred clamp, b. By thus opening the hive at the side, the frames can be removed without liability of injuring the combs or bees in

fitting them out at the top of the hive. The sides of the honey board, G, rest upon the rabbets, c, three inches below the top of the hive. These rabbets not only serve as a rest for the honey board, but allow it to swell without becoming tight, or to shrink without opening cracks in the hive. The rabbets extending down the side of the hive, obviate the same difficulties with regard to the movable portion. At the approach of winter the surplus honey boxes are removed and the deep notches in the ends of the honey board covered with wire cloth; the basin or cavity above the honey board is then filled with cut straw or shavings to absorb the moisture arising from the bees, thus keeping the interior of the hive dry and free from frost. A swarm thus prepared, in a hive having good depth of comb, with holes cut through them near the top for winter passages, will not perish while there is honey in the hive. The roof-shaped cap, H, is made large enough to fit over the hive and is supported by strips fastened upon the inside; and it is easily removed without jar. The hive is ventilated from the air-chamber below the bottom board, by a channel (not shown in the engraving), covered with wire gauze, so placed as not to be coated over by the bees and yet admits air without light into the hive, through the lower hole in the flap, I. By means of this device bees may be swarmed on the nucleus system, securing to the new swarm a fertile queen, and scarcely interrupting the labors of the parent stock. For further particulars address the patentees, H. A. King & Bro's, Nevada, Ohio.—*Scientific American*.

"KING'S TEXT-BOOK FOR BEE KEEPERS," is the name of a book published by the patentee of the above hive—"being a complete reference book on all the practical subjects connected with the culture of the honey bee, giving minute directions for the management of bees in every month in the year." Price 30 cents—address as above.

FARMING IMPLEMENTS AND MACHINERY.—The advanced value of farming implements and machinery according to the Agricultural Report, is sixty-two per cent. This is gratifying, for it points to an important fact, that agriculture is availing itself of those agents—labor-saving powers—which have so rapidly advanced our manufactures. Reapers, mowers, and threshers, have made our country known at every industrial exhibition, and they have gone on so many farms, that in the absence of a large part of agricultural labor, estimated at from twenty to twenty-two per cent., the usual harvests have been gathered and threshed, not only without loss to the crops, but at a less cost.

THE MARYLAND FARMER & MECHANIC.

AT \$1.50 PER ANNUM,

PUBLISHED ON THE 1ST OF EACH MONTH,

BY

S. S. MILLS & CO.

No. 24 South Calvert Street,

CORNER OF MERCER,

BALTIMORE.

TERMS.—\$1.50 per annum in advance. Six copies for \$7.50. Twelve copies for \$15, and a copy to the getter up of the club.

ADVERTISEMENTS.—For one square of eight lines or less, \$1 for each insertion—1 page for 12 months, \$100—single insertion \$16—other advertisements in proportion.

S. SANDS MILLS, } PUBLISHERS AND PROPRIETORS.
E. WHITMAN, }

BALTIMORE, MARCH 1, 1864.

TO OUR AGRICULTURAL FRIENDS.—Our friends and the friends of agriculture, into whose hands this number may fall, will greatly oblige us by presenting the claims of "THE FARMER AND MECHANIC" to their friends and neighbours. There are many farmers and residents of the suburbs of cities and villages, who are not subscribers to any journal devoted to agriculture and its kindred sciences, who could be easily induced to forward us their names, if the character and claims of our journal were properly presented to them. A very little effort would secure a good list, in almost any neighbourhood.—Any one sending us *five* names with the cash, will be entitled to a sixth copy. Subscription price per annum, \$1.50.

OUR SUPPLEMENT.—We are again compelled to issue a Supplement of 16 pages, so as to accommodate the large demand upon our advertising columns, thereby enabling us to offer the full number of pages of reading matter. As a general rule we desire that there shall be no interference with our regular amount of reading, though the arrangement is made at a heavy additional expense.

EXHIBITION ROOM.

We propose to connect with our office an *Exhibition Room*, if it meets the encouragement of our friends, where rare and curious productions of Fruits, Flowers, Vegetables, &c., &c., may be deposited for the inspection of the public.

About three thousand barrels of Irish Moss are gathered annually at Scituate, Massachusetts. It is worth, at first hands, from \$5 to \$6 per barrel.

SPECIAL NOTICES.

There is nothing more important to the economy of farming operations than to see in proper time that your implements are not only in good order for the work before you, but that you are provided with every appliance that will render your labours most economical and productive. As a means of facilitating an end so desirable, we refer our friends to the establishment of Thomas Norris, 141 Pratt street, where everything in the line of useful and efficient agricultural machinery can be procured at reasonable prices and of first rate quality. Among the articles on sale in the establishment we call attention to the following: Wood's Prize Mower; Wood's Self-Raking Reaper; Westinghouse's Horse Powers; Threshers and Cleaners; Van Wickle's Grain Fans; Plows and Castings of all kinds, including the Elliott Late Improved Iron Beam Sod Plows, Cultivators, Harrows, &c., &c. These machines are too well known to the Agricultural public to need commendation at our hands. A word to the wise is sufficient.

The central nurseries of Messrs. Ed. J. Evans & Co., York, Pennsylvania, offer the facilities to those who intend replenishing their orchards or providing themselves with ornamental and shade trees for the field and lawn.—They offer for sale Fruit Trees of every variety, small fruits and vines of the choicest kinds, together with an assortment of deciduous and ornamental shade trees, as well as Evergreens, including the Norway Spruce from 5 to 7 feet high. Also a variety of "New Native Apples," which promise to be particularly valuable as late keepers in this latitude. A general catalogue will, upon application to this office, be addressed to any of our subscribers who desire it.

The facilities of procuring, with despatch, at moderate rates by mail, every description of Flower Seeds—these little gems which play so important a part in beautifying both garden and household, and add so much to the enjoyment of rural life—are offered by J. Wesley Jones, Chatham 4 Corners, N. Y. They offer also new and choice varieties of Garden Seeds. We shall next month present our readers with plates and description of the White Japanese Musk Melon and the Star Ipomea, cultivated by Mr. Jones, a fruit and flower which is, indeed, worthy of special notice.

STEAM vs. MUSCLE.—At this time, when the scarcity of labour occasioned by the demand of the army upon the industrial classes is operating so injuriously in all departments of industry, the corresponding demand upon the ingenuity of mechanics is to supply the desideratum by devising machinery to dispense with human labour, is being promptly and efficiently met. But no where is the value of this auxiliary more distinctly seen than in the production of the various parts of dwelling houses now so much in demand. Messrs. Maughlin & Johnson, by an increase of power and machinery, in their single factory, are manufacturing Sash, Windows, Cornices, Doors, &c., in immense quantities, and with a perfection and rapidity until lately unknown—and we remind our patrons that it is only necessary to resort to such an establishment as this to produce a dwelling or other building, perfect in almost all its appointments in less time than it would have taken a few years ago to lay the foundation on a level with the surface.

Nothing so conduces to health and comfort as good well fitting Boots and Shoes, and to those who desire to luxuriate in a pair of first class make, can be accommodated by our neighbor, Geo. S. Clogg, No. 2 S. Calvert street, one door from Baltimore, with all descriptions of boots, &c.

COMMUNICATED.

CULTIVATION OF SORGHUM AND ITS MANUFACTURE INTO SYRUP.

We take pleasure in publishing the following valuable communication, from the pen of JAMES BRUSTER, Esq., of Reistertown, Maryland, on the cultivation of the Sorgho, and detailing, clearly yet succinctly, the process of its manufacture into syrup. The subject is one of peculiar interest at this time, and is especially important as introducing a new branch of agricultural labour which, at the present price of sugar and molasses, may be made with proper attention very profitable. The difficulty of converting Sorgho syrup into granulated sugar is one that has tasked the best powers of our chemists and experimentalists, and it has not yet been surmounted. But the fact remains, nevertheless, that Sorgho will make a large quantity of syrup to the acre, and of the very best quality. Its conversion into sugar will follow after a while. We should be pleased to learn from Mr. Bruster his method of clarifying his syrup, and also, whether it is entirely free of that vegetable flavour of which they sometimes complain in the west.—*Eds. Farmer.*

ED. BOWLES, Esq., *Middletown, Frederick, Co., Md.*

Your esteemed favor of 7th inst., making inquiry concerning my experience during the past year in the cultivation, growth and manufacture of the various Northern canes; cost and kind of machinery used; kind of cane planted; cost of manufacturing per acre, &c., &c., is at hand and noted. Having queries of a similar character from numerous parties in various sections of the State, I embrace this opportunity to give a few hints through the columns of the "*Maryland Farmer and Mechanic*," so that all agriculturists, and others interested, may have the benefit of the information you desire.

I will very briefly give the results of my labours during the last year, and conclude by submitting such observations as I think useful to those who are about embarking in the Sorgho enterprise, with a view to experiment as well as profit. During my extended tour through the Western States, in the fall and winter of 1862-3, my attention was called to the great amount of syrup made from Sorghum and Imphee, and with a view of testing its adaptability to the soil and climate of Maryland, I procured seed of the Chinese and African varieties, from sources that could be relied upon, and in the spring planted about four-and-a-half acres. The cold, wet, and unfavorable weather, caused the seed in one patch of about two acres, to rot. This was replowed and planted the first week in June. The balance of ground baked badly; some of the seed never came

up, and the result was, the cane standing so irregular, that I did not have more than what should grow, in a fair season, on three and a half acres. Beside this, the early frosts injured very materially at least one-third of the two acres planted in June, so as to render it almost worthless. The very unpropitious seasons of alternating wet and dry that continued till late in the fall, had much to do in preventing a proper and perfect development of the saccharine elements of the cane. Indeed, so unpromising and discouraging was the prospect for a crop, at one time, that I hesitated about incurring the expense incidental to its manufacture, but as the season advanced the prospect brightened and I procured a No. 5 Clark Hedges Mill for expressing the juice, and a No. 4 Cook Pan, adapted to a brick arch, for defecating and concentrating the juice into syrup. Having the mill and pan in readiness, after procuring Cooling Tubs, pipes for conveying juice from mill to the evaporator, skimmers, &c., I obtained boys enough to cut the cane, strip it of leaves, and save seed, and I went to work.

It being my maiden effort, at such business, you will not be surprised to learn, that at first I made an inferior article of syrup, but after an experience of a day or two, we succeeded in running off a very superior article of molasses. The mill used in expressing the juice from the cane was the regular two horse mill, but I found it very easy work, so much so that a part of the time I worked but one horse. My pan required a man and boy to attend it properly, as one is constantly required in skimming and cooking down, while the boy is firing and aiding in a number of ways. With such machinery and labour we made from sixty to eighty gallons per day of ten to twelve hours. I found no difficulty in learning ordinary farm hands, in the course of a few hours to work the pan well.

As you are already advised, my crop, as was the case throughout the country generally, turned out badly,—making in the aggregate but 700 gallons—I should have made 1000 gallons on the same ground, had the season been good, yet I am convinced, that even this yield, nets me over 100 per cent. more than any other crop I could have grown.

The trouble and expense of maturing a crop of cane is no more than of corn, but both being ready to save, I do not agree with many in the West, in saying, that one is as easily saved as the other.—From my experience I believe it costs nearly one-fourth more to manufacture and save a crop of cane than of corn—yet the cost of cutting and stripping cane last fall was materially increased, owing to its being blown down by counter winds which left it lying in all kinds of ways.

There are other sources of profit in a crop of cane than the syrup—in fine, every part of it has a value.

The seed when properly matured is more valuable than a crop of oats, from the same ground, for feeding purposes. It also makes a very fine flour, and when used and baked as buckwheat, a really fine bread. Owing to the early frosts last fall much of the seed did not mature; this I fed daily to hogs, sheep, &c., with very good results. Independent of such purposes, ripe selected seed is in great demand at this time for planting in sections of the West and East. I have been offered high prices by dealers in Ohio for all my crop for seed, but have declined sending away what I know to be pure and good, and trusting to what may be an inferior seed for our own use. The *bagasse*, or cane stalk, after the juice is pressed out, is valuable for making paper. Experiments in the West have demonstrated its value for this purpose as greater than rye straw. Our Maryland paper makers do not so consider it, yet they gave last fall \$10 per ton, and hauled it.

In manufacturing the juice into syrup, there is an amount of *skimings* that is not only valuable for feeding hogs, but excellent for making vinegar. I have seen vinegar, from this, that if any thing, was superior to the best and purest cider vinegar. Previous to running through the mill, the leaves or blades of the stalk are stripped off, and when cured or saved are fine fodder. The amount of fodder thus saved per acre, is much more in quantity, and better in quality, than from cane.

The result of my operations in this enterprise, in a pecuniary point of view, may be seen at a glance, as follows:

700 gallons of Syrup, at 65 cents (wholesale price),	\$455.00
Amount of Seed sold, - - - - -	50.00
Amount of seed on hand and fed to stock - -	50.00
Bagasse for paper making, - - - - -	60.00
Blades, skimings for vinegar, &c. - - - -	25.00
	<hr/>
	\$640.00
Deduct expenses of cultivation and manufacture,	200.00
Net profits, - - - - -	<hr/>
	\$440.00

I am satisfied the above figures fall rather under than over the facts, as I have sold most of my crop at 75 cents, instead of 65, per gallon, besides I have given the cost of manufacturing at more than it really was. But I am wearying your patience, and will conclude by a few words on soil, seed, cultivation, machinery and manufacturing. So much has been said and written by practical men in all sections of the country, in reference to the best soil, for a full development of the saccharine elements of the various Northern canes, that I hardly know what to recommend. In truth, I don't think any soil is very much better than another, for I have seen them grow successfully on almost every soil; hence I care not what the soil may be, provided it is rich in elements that promote vegetable growth. Yet I would prefer a light sandy loam, with a trace

of lime in its composition, as producing the brightest and finest syrup. Cane will stand almost any amount of drouth, hence select a dry, high and rolling situation in preference to a low bottom. The ground, if a sod, should be plowed in the fall or winter, and stirred well or crossed in the spring.— Before planting, thoroughly pulverize and reduce to the finest tilth. Cane may be planted in hills or drills, as the grower may desire. More can be grown in drills, but the labour of cultivation is greater.— In either case get the seed as near the surface as possible; then furrow or lay out the ground very shallow, cover the seed very lightly, say not over one-half an inch deep. Unless the ground is very warm and in a favorable condition for germination, care must be taken in covering, else the seed will rot.

KINDS OF CANE.

There are as many varieties of cane as there are of Indian corn, and a great diversity of opinion exists among growers as to which is the best. I have found the Chinese, or Sorghum, when pure, for a principal crop, to be as good as any, yet I think some varieties of the Imphee or African Canes, most excellent. The Chinese has a reputation for its syrup making qualities, but is not so good for sugar purposes, as the Oom-see-ana or Nee-a-zana, the best varieties of the African species. The Nee-a-zana or Otaheitan cane, as it is called in some parts of the west, does not grow so tall as the Chinese, is not so apt to blow down, ripens some time earlier, does not sucker, and for granulation, surpasses any variety I know. The Chinese or Sorghum has a tall strong growth, suckers profusely, and is unsurpassed for syrup, while in some hands it granulates readily and makes a fine sugar. The Oom-see-ana, or white Imphee, an African variety, is very celebrated also for its granulating qualities, as well as for syrup. It grows taller than the Nee-a-zana, and suckers very sparingly, and is one, if not the best, of the Imphee varieties. My overseer pronounced this variety superior to any I grew, in richness and juice, quality of syrup and flavor.

What I am more particular about than anything else, is to plant seed that is pure and free from amalgamation with other plants that tend to its deterioration. Cane has a tendency to mix with any varieties of the millet family, and as Broom corn is more extensively grown than any other variety of this species, we seldom find a crop of cane that is not a hybrid. Be careful in selecting seed that is pure.

CULTIVATION.

I should have said a few words about preparing seed for planting. Many think it absolutely necessary to soak the seed and even sprout them before planting, but such is not the case. One of my friends last year planted his seed dry and had as fi

a stand of cane as could be desired. Many think time is gained by soaking and sprouting the seed before planting; this is readily done by pouring on hot water, and letting it stand until it becomes about cold in a warm room, then pouring off the water and wrapping up the seed in wet cloths, and keeping warm till the sprout appears when it should be planted. After the seed comes up, the ground should be stirred freely and all weeds kept down.—At first it has a very lazy and sluggish growth, very much like Broom corn, during which time it is growing under ground. In this state, all that can be done is to keep the surface loose and the weeds down, but when it starts it runs up very rapidly. After this, no work is required, more than running the plough through, when it is some two feet high.

HARVESTING AND MANUFACTURING.

The best time to cut and manufacture, is just after the seed has turned black. If the weather is pleasant and warm, I would let it stand till most of the seed has thoroughly ripened or turned black, but if heavy frosts threaten, cut it up and house or protect from sun and rain, when it will keep for weeks. A light frost does not hurt it, as it is much more hardy than corn, but a freeze will cause fermentation as soon as it thaws. My experience demonstrates that cane does not attain its maximum of saccharine matter until it is fully ripe, and as soon as it is, then make it up as soon as possible. I do not believe in letting cane stand, when ripe, to improve any.

As to machinery I would recommend a three roll mill, made of iron, as the only one capable of thoroughly expressing the juice. There are a number made in the West, but of late the mill made by the "Clark's Sorgho Machine Company," of Cincinnati, has given more general satisfaction—I look upon it as the best one in use. As to apparatus for making syrup and sugar, it is conceded that the Cook Evaporator has no equal. It combines certain patented features that are essential to a successful reduction of the juices of these canes. It is unnecessary for me to add a word to the superiority of the Cook Evaporator over all others in the market.

I have endeavored to give such information as was presented to my mind, yet if I have omitted anything, drop a line and it shall have my prompt attention.

JAS. BRUSTER.

Reistertown, Balt. Co., Md.

TO CORRESPONDENTS.—Those who may have any useful facts at command, in relation to rural economy, or mechanics, are invited to make "The Farmer and Mechanic" the organ for their publicity—they will at all times receive a welcome. We suggest they be as brief as the subject will admit of.

Stone Lime—Shell Lime—and Pulverized Shells— Their Relative Value as Fertiliz rs.

The following inquiry from a subscriber, offering, as it does, a reference to this interesting question, and the writer's own verdict upon the subject may be of interest to our readers, and we insert it in the hope of obtaining a satisfactory answer to his inquiry.

To the Editors of the Farmer and Mechanic:

I avail myself of the use of your valuable columns to ask a question, in which I have an interest in the double sense of the term. I might, I know, have dropped you a private note, and might have received a satisfactory answer, as far as your personal knowledge is concerned; but I wish to make the inquiry in a general way, and in such a public manner as to insure an answer, should it be in the power of any one of your readers to give it.

I have long been in the habit of using lime upon my fields and from its sensibly beneficial effect upon my crops, I could not be persuaded to do without it. I have found, by much attention to the subject, that shell lime is always much preferable to that produced from stone, because it is more reliable in regard to purity, and possesses an element utterly indispensable to the growth of any crop—I mean phosphoric acid in combination. I have been obliged to resort to the lime manufactured by the artificial process of burning the shells, because I know of no other means of bringing them economically into a condition fit for the great laboratories of the soil. This I have felt as a great *desideratum*, because I think it demonstrable that, in the process of burning the shells, to say nothing of the trouble and inconvenience necessary to effect it for one's self when the facilities are at hand, must disengage a great deal of the phosphoric acid which is so valuable to plants of every description, that without it, not a blade of grass could appear above the ground. Much of that matter in the shell which renders decomposed fish so efficient a fertilizer, must necessarily escape in the "fervid heat" of the kilns, and it is with the hope of obviating this difficulty for myself that I now address you.

Do you know, or do any of your readers know, and will you or any of them tell me whether or not there is a machine in use anywhere for bringing these shells to an impalpable powder, so that the laboratories of nature can disengage and appropriate at once all their valuable elements? Finely powdered shells mingled with the soil in October, I am satisfied would be available to the spring crops.

Is there no such machine or will no mechanic invent it for us? Many and valuable have been the contributions of our national ingenuity to the laboring husbandman, but no benefaction could be greater than this. Will any one answer?

Horticultural.

SHELTER AND PROTECTION OF ORCHARDS.

We condense the following article from the Report of the Commissioner of Agriculture for 1862. It is much more discussive than its title implies, and may possibly be of more value in the Northern States than in the latitude of the Middle States.—Nevertheless, it offers so many suggestions that will be found surviceable everywhere, and it treats on a subject of so much general importance, that all classes of persons who take an interest in rural affairs, may derive advantages from the perusal:

Among the many subjects of interest to the fruit-grower there are none that so imperatively demand his attention as those of shelter and protection to his crops; certainly there are none that present a greater prospect of increased remuneration in the products of the orchard and garden.

It has become a standard remark of late that many of our best fruit trees are more liable to disease, and their products more generally inferior, both as to quantity and quality, than they formerly were. Admitting as a fact that much of this inferiority is owing to the increased age of orchards, as well as negligent culture, it cannot be denied that, even with improved knowledge in culture, many fruits are not produced in such perfection as formerly, under what would now be very properly termed unskilled labor.

Throughout most of the older cultivated regions of our country it is now of rare occurrence to find an orchard producing fruit not more or less imperfect. Apples are disfigured by warty and scab-like blotches, and pears are cracked and worthless.—Blights, so called, are also more frequently met, and their origin as little understood as it was fifty years ago. We are fully aware of the prevailing tendency of some to applaud the past and decry the present. We can, also, give full allowance for the sympathetic associations of youthful times, when all seemed fair to our eyes, and when "stolen waters were sweet, and bread eaten in secret pleasant," and quarrel not with those who cannot see in our Bartlett's and Belle Lucratives any such excellence as characterized the early Catherines of boyhood. Making due allowance for all this, we are still convinced that both diseases and destructive insects are on the increase, and that the time has arrived in all its fullness when cultivators must possess themselves of all attainable knowledge relative to the principles of vegetable growth, and endeavor to deduce from such knowledge a course of practice applicable to their locality and the various crops they cultivate.

In the culture of plants the great aim should undoubtedly be to properly balance the agencies of

growth; this is the great art of culture. Aware of the unlimited ramifications of this subject, it is not proposed to enter upon it at present, further than slightly glance at the importance of shelter as an auxiliary towards securing a desirable equilibrium of some of these agencies.

In brief, it may be stated that the necessities of shelter are two-fold—to guard against excessive aridity during summer and severe cold during winter. In other words, to modify the debilitating effects of the injurious evaporation produced by the extremes of heat and cold.

The debilitating effect upon vegetation of continued aridity during summer is well known, and various expedients are resorted to, in order to ameliorate its influence, and it is found that one of the most effective, and at the same time most available means of checking evaporation is by arresting the currents by shelters of vegetation. Our natural forests are rapidly being destroyed, and it is admitted that the destruction of forests tend to lessen the moisture both of the atmosphere and the soil. The disappearance of the streams in the mountains of Greece, and the sultry atmosphere and droughts of the Cape de Verd islands, have been attributed to the destruction of forests. In densely wooded countries, where, in connexion with excessive rains, the climate is rendered unhealthy, clearing the lands of vegetation has been the means of vast improvement, as we are told has been experienced at Rio de Janeiro. Hence it is reasonable to suppose that by planting belts and groups, in masses, of hardy, suitable trees, in the vicinity of orchards and gardens, the dry currents will be arrested, and injurious exhalations from the crops measurably prevented; and, further, it may be found that atmospheric moisture will be increased by the proximity of such masses of trees from the results of condensation on their surfaces. That exhalation is much diminished when the drying current is arrested, and increased with the rapidity of the arid breeze, is well known, and the formula has been given that the same surface which, in a calm state of the air, would exhale one hundred parts of moisture, would yield one hundred and twenty-five in a moderate breeze, and one hundred and fifty in a high wind: the beneficial effects of arresting or diminishing the force of currents is, therefore, very evident.

LAWNS AND PLEASURE GROUNDS.

For the successful adornment of lawns and pleasure grounds, shelter is of the first importance. One of the greatest obstacles to the growth of choice evergreen trees and shrubs, especially during the earlier stages of growth, is the aridity of our summers. Broad-leaved evergreens, as the Mahonia, the Rhododendron, and others of similar character,

must be sheltered and protected if they are expected to grow into objects of beauty or interest. In their native habitat these plants are protected by superior vegetation, and surrounded with an atmosphere more uniformly charged with moisture than they usually are in artificial plantations.

Protection during winter is not less an object of utility. The degree of cold that plants will resist uninjured is a question that cannot be definitely answered; a plant will occasionally be destroyed by a degree of cold that it previously encountered without apparent injury. We are not to suppose, in cases of this kind, that they proceed from changes in the laws of nature, but rather that the resisting power, by some means or other, has been reduced, or, what is more probable, that the mere thermometric degree of cold is not the main cause of injury.

GREEN-HOUSE AND TENDER PLANTS.

When green-house or other tender plants are accidentally frozen, they may be resuscitated by carefully shading them from the sun, sprinkling them with water, and surrounding them with a moist atmosphere, continuing these conditions until the temperature is increased to a safe point. We have repeatedly tried the experiment of removing a plant thus frozen into a house, where it was placed under the influence of a dry heat and exposed to the sun while in the frozen state, and the experiment proved fatal to the plant. This mode of treating green-house plants, when accidentally exposed to a few degrees of frost, is a common and successful expedient. We have seen eight degrees of frost suddenly obtain in a green-house containing a varied collection of plants, many of them of a very tender nature, and so completely frozen that many of the branches and succulent shoots were rendered as brittle, and broke as easily as a delicate rod of grass; yet by prompt and effectual shading, and increasing the moisture and temperature slowly, very few were injured. It is difficult to conceive how plants so circumstanced could escape destruction if their tissue is disrupted when the sap which they contain is converted into ice, since no after treatment could then save them, as no process, either slow or rapid, could reconstruct the tissue.

FRUITS AND THEIR CULTURE.

Perfect maturity of growth is the great object of all cultivation; this fact should always be uppermost in the mind of the fruit-grower. Too much importance cannot be placed on the fundamental principle, in fruit culture, that whatever tends to render tissue moist, increases its susceptibility to injury from cold, and whatever tends to reduce humidity, and hasten the conversion of fluid matter into woody fibre, increases its power of resisting cold; but this is not the only result of thorough maturity, for without it there can be no fruit. The

failures in fruit culture arising from excessive luxuriance, and stimulated growths that never mature, are beyond calculation. The production of mere wood growth and the production of fruit are antagonistic processes; and until this fact is recognized and acted upon the highest excellence of culture will not be attained.

THE APPLE.

The cracking of the apple and the blotches and scarifications frequently observed on its surface have been referred to the attack of fungoid growths or mildew. Various examples have been cited where orchards, sheltered from prevailing winds, have shown a decided exemption from these attacks. In opposition to this supposed cause of immunity it has been asked, Are our orchards more exposed than they formerly were? As a general rule, we think it quite likely that they are, seeing that in all sections as cultivation increases the forests are gradually thinned and cleared. The effects of destroying the forests of a country have already been noted; and we have a partial recognition of the importance of shelter in the precept of many intelligent orchardists who advocate the planting of fruit trees much closer than has formerly been the rule, and also in the practice of encouraging the trees to branch quite to the surface, instead of training to a clear stem five or six feet from the roots. Both these expedients have a tendency to prevent rapid circulation of air through the soil as well as from the surfaces of the trees. Examples are not yet sufficiently numerous to warrant a decided opinion; but so far as they have been noted, the prospect of greater immunity by this mode of treatment is encouraging.

THE PEAR.

The cracking of this fruit has given rise to much speculation, and various theories have been advanced with reference to the cause. For a long period the opinion prevailed that it was owing to a deficiency of certain mineral ingredients in the soil, and various remedies based on this assumption were freely dispensed and tried, but with indifferent success.—It is not now doubted that it is the result of mildew, and that the atmosphere, and not the soil, is at fault. In support of the opinion that it is governed by atmospheric influences, the fact may be quoted that the White Doyenne, one of the finest pears when perfect, rarely succeeds in exposed localities; yet, when grown in positions thoroughly protected, it is still produced in all its pristine beauty and excellence. Referring to cases with which we are familiar, we have seen annual exhibitions of this fruit grown in the built-up portions of the cities of Philadelphia and Baltimore, most perfect of its kind, without spot or blemish, when those from trees growing in the more exposed suburbs invariably

proved defective. Again, it has been lately shown that, fruited in the quiet atmosphere of the fruit-house, they attain great perfection; and further, we have seen a tree, one of a row that produced worthless fruit, enclosed on all sides by a small box, open at top and elevated a few inches above the soil, produce perfect fruit, while the productions of the adjoining trees were, as usual, cracked and worthless. Whatever may be allowed for protection in the above cases, it is very evident that they were not influenced by the nature of the soil.

THE BLIGHT ON THE PEAR.

The origin of the blight on the pear tree has also been a fruitful source of conjecture. No doubt the term is applied to effects produced from various causes. We will state our observations on one species of this malady or disease. Those who have pear orchards will, perhaps, recall instances where the trees, or portions of them, have suddenly ceased to grow shortly after budding in spring. The young leaves and growths present a blackened appearance and rapidly wither. On examination, the bark will present a shrivelled appearance, and on cutting into the wood it is found discolored and apparently in a state of decomposition. In some instances a solitary limb, but more usually one side of the tree, will be more particularly affected. By cutting down until all discolored wood is removed, the plant will recover; but if neglected, the entire plant will be destroyed. Having lost many trees in this manner, and observing that it was most prevalent after severe winters, especially if the ground was frozen fourteen or sixteen inches during February and the early portion of March, it occurred to me that it was induced from evaporation at a time when the plants were unable to absorb by the roots. When the soil is frozen to a depth of sixteen inches it is evident that all roots within that depth must also be frozen, and absorption and circulation be completely arrested. While the roots are in this state the branches are subject to the drying air of spring, and their juices are exhausted by evaporation; the supply of moisture by the roots being inert, the plant has no more power of supporting life than it would have supposing it to be cut over at the surface and thrown on the ground. These conditions, long continued, must result in injury; and if not immediately destructive, disease is engendered, to be intensified by the first untoward influence.

It is not to be supposed that this is the sole cause of blights, but I am convinced that it is a frequent one, and more prevalent on what are termed dwarf pears, the roots of which being quince, do not reach so deep as the pear roots, but rather ramify and spread nearer the surface, and therefore are more likely to be included in the frozen strata. Supposing that this was a source of blight, I adopted the

practice of covering over the roots in early winter with charcoal dust, a few inches in depth of which will entirely prevent the penetration of frost. Since this precaution has been adopted, I have not observed even a blighted limb or leaf. I think it cannot be shown that the roots of plants are in any degree benefitted by being frozen, and it can certainly be shown that they are oftentimes injured by it. Therefore it is a safe rule to protect the roots so that their absorbing powers may constantly be ready for action.

PROTECTION FROM LATE FROSTS.

It may be well to note, in connexion with this subject, that crops, both of apples and pears, are sometimes lost by late frosts when they are in bloom. It is an old custom, but now much neglected, to have ready, in various suitable localities around an orchard, several heaps of dried weeds or rubbish of such description; then should a slight frost occur when the trees are in bloom, set fire to these heaps and endeavor to create as much smoke as possible. Crops have repeatedly been saved by this precaution. It is obvious that these smoking heaps should be placed on the windy side.

THE PEACH.

The curl, or leaf blister of the peach, although seldom fatal in its effects, checks the growth and diminishes the crop. From the circumstance that these blistered leaves form a famous asylum for the aphid, these pests of vegetation are generally found lurking in the blistered recesses which has given currency to the opinion that they are the sole cause of the evil. This, however, is not the case, as is evident from the fact that they are not always present on blistered leaves. It is entirely atmospheric, and may be looked for after sudden extreme fluctuations of temperature. Referring to my notes, I find that a change of 30° in 48 hours invariably produced it, but trees sheltered from the prevailing wind were mostly exempt. A notable instance is recorded in my journal of 1849. The thermometer fell 40° in twenty-four hours, with a cold northeast wind. Previous to this the peach trees in a small orchard planted on the east side of a close board fence were in perfect health: in less than one week afterward the leaves were severely blistered, and the sheltering influence of the fence was peculiarly prominent.

THE GRAPE.

It is well understood by intelligent grape-growers that atmospheric changes are the great cause of mildew on that fruit notwithstanding that opposite opinions are persistently promulgated. We have taken the trouble to investigate some of these pretended immunities, and have been astonished at the perfect ignorance displayed with reference even to

the appearance of mildew. We have visited a vineyard where the plants were almost totally denuded of their foliage from its effects, yet the proprietor was publicly announcing his system of culture as one that insured entire exemption from mildew and other diseases. We allude to this here for the purpose of showing that opinions can only be valuable when given by an intelligent and experienced observer.

The following extract from a late work will show the necessity and effects of sheltering vineyards:

"The fact that grape vines growing in sheltered positions, such as under the eaves of buildings and under the shelter of trees, are generally found exempt from this species of mildew, points us to the most available remedy; and the common occurrence of vines growing in trees, where they are sheltered by overhanging foliage, retaining their health, while branches from the same roots trained on an exposed trellis near by will be severely attacked by mildew, is very strong evidence that the cause is mainly atmospheric."

"Tracing the cause of mildew to this source, it becomes a matter of inquiry how far we can employ expedients that will either prevent or modify its effects. Undoubtedly shelter of some kind from sudden changes and atmospheric currents is one of the most prominent, and every experienced grape-grower can recall instances where even a seemingly slight protection proved of great value."

THE STRAWBERRY.

Most of our cultivated varieties of the strawberry will, on ordinarily drained soils, endure without winter protection. But it is a ruinous mistake to suppose that they are not benefitted by it. The statement can be proved that, on an average of seasons, plants properly protected will produce one-third more fruit than those left exposed.—The crop will also ripen earlier; the opinion of those who have the most experience, and who are most successful and cultivate with most profit, is uniformly in favor of winter protection. Shelter from the effects of wintry winds prevent exhaustion, for although the strawberry is a lowly plant, it is greatly affected by the rude breezes so frequently characteristic of our spring weather.

THE RASPBERRY.

To procure a perfectly hardy raspberry has long been one of the greatest efforts of fruit-growers.—Perhaps we already possess as hardy a race as we can expect. To have fruit of the best quality it is necessary to enrich the soil, and this stimulus tends to a luxuriant growth of cane which will not invariably attain that thorough rigidity of maturity necessary to withstand the winter and spring winds. But the finest varieties need not be excluded simply because they require protection. A crop may always be insured by bending down the canes and covering them lightly with soil. In tolerably sheltered grounds good crops are secured without such pre-

cautions, and it has long been observed that those growing on the south or east side of a fence are most uniformly productive.

SHELTER GENERALLY.

No better mode of protecting roses, grapes, raspberries, &c., during winter, has ever been practiced than that of simply bending down the shoots and covering them with soil. Even when so as to be in close contact with the damp soil, without any covering, the benefit is very decided. They are thus not only placed below the rapid drying currents, but are enabled to absorb moisture by their surfaces to counteract evaporation.

To provide the necessary shelter, recourse must be had to artificial plantations of hardy trees, and of these evergreens will form the most effectual protection, and should mainly be depended upon. Of all evergreens, the Norway fir will prove most serviceable, and a single row of them planted six feet apart, will, in a few years, form a sheltering wall of dense foliage. This tree naturally grows very symmetrical; but if any of the side branches outgrow their neighbors, they should be trimmed in to a proper distance. The lowest branches should always be widest. A little timely care will always insure this.

When large areas or open level plains, as on the western prairies, a single row should not be deemed sufficient. Belts not less than forty feet in breadth should be planted. The most effective points to plant are those from west round by north to east.—A variety of trees may be used in these belts. The white pine is a fast-growing tree, and can be kept thick and compact by cutting the points of those shoots that tend to over luxuriance. The Austrian pine is a tree of dense, robust habit, very hardy, and, like the Scotch pine, will adapt itself to any dry soil of good depth. The balsam fir will thrive better in lowlands than any other evergreen, and, although it may not be the most ornamental of trees, it is well fitted for massive planting. The hemlock spruce, most beautiful of all evergreens, should not be overlooked. It will thrive well as undergrowth, and form a graceful boundary fringe to thickets.

In vineyards and pear orchards, more particularly the former, great advantage would be derived from secondary hedges running in parallel lines, say two hundred feet apart. These may be formed of the American arbutus, our best evergreen hedge plant. In pear and other orchards, Norway fir may be used for a like purpose.

To secure an effectual shelter the plants must be thickly set; and even when the plantation is intended to be ultimately evergreen, a liberal mixture of rapidly-growing deciduous trees should be introduced. Fast-growing trees, as the silver ma-

ple, English alder, various willows, balsam, and cottonwood poplars, the European larch, and others, will be most suitable. The young evergreens will be greatly benefited by the shade of the deciduous trees, but the latter should be pruned and gradually thinned as the evergreens increase, and removed altogether when the object of their introduction has been accomplished.

Grape Culture.

GRAPE CULTURE FOR MARCH.

By A. HARSBARGER, Juniata Vineyard, near Newton Hamilton, Mifflin County, Pennsylvania.

During this month the vigneron should look well to his vines. All that have not been pruned should be now attended to. Be sure to prune close and shorten the shoots in proportion to the strength of the vine—do not use the knife too sparingly, for there is more danger of leaving too much bearing wood than too little.

Apply the manure now to the vine, if not already done—it should be regulated by the nature of the soil. A damp soil should be avoided in the selection of a location for a vineyard. Stable manure in large quantities should not be applied, as it causes diseased vines. On upland or dry soil it is beneficial. Bones, lime, wood ashes, &c., are best on low or damp land. My experience, taking the risk of rat, mildew of the grape, into consideration, that taught me to make the land no richer than for a good crop of corn. Set stakes when the ground is wet; but do not tie and bend the vines until the sap begins to rise and the bud swells.

Root grafting can be done the latter part of this month. I always graft new varieties on strong stocks or roots underground with a good mulch on the surface, and by this method generally get them to fruit the second year, sometimes the first, frequently having single graft to make from 10 to 50 feet of ripened wood the first season and bear the second.

[A soil containing lime and the phosphates is unquestionably the best adapted to Grape culture, and hill slopes to the southward and eastward by far the most preferable for a vineyard. Low damp situations should always be avoided. Bones, ashes and lime are infinitely better than stable manure.—*Eds. Farmer.*]

GRAFTING GRAPE VINES.—Grafting grape vines must be done early, before the sap starts, just as soon as the frost will admit removing the earth, or late in June, when the principal flow of sap is over. It should be done precisely as tree grafting is performed, covering both stock and scion with earth, leaving the bud about an inch below the surface of the soil.

WINE MAKING.

BY ROBERT BUCHANAN, ESQ.

THE WINE PRESS

Is made somewhat like a "screw cider press." An iron screw, three or four inches in diameter is used—either in a strong upright frame, or coming up through the center of the platform (the latter is the cheapest, and most simple in construction.) A strong, tight, box platform six or seven feet square, of two or three inch plank, six or eight inches high at the sides, is wedged into heavy timbers; and, in this, a box of one and a quarter inch boards, five or six feet square, perforated with holes nearer the lower edge, ten or twelve inches high at the sides (made to be readily taken apart.) is placed to contain the mashed grapes. Boards to fit loosely inside of this box, and lay on top of the pile of mashed grapes (or "cheese" as cider-makers call it) and pieces of scantling to lay across to receive the pressure, complete the press.

The power is applied by a strong lever attached to the nut or female screw, and the juice runs out through a hole, with a spout, in front of the platform, into a large receiving tub.

GATHERING AND PRESSING THE GRAPES.

The grapes should remain on the vines until very ripe, "dead ripe" as some express it. Pick off all decayed or unripe berries from the bunches, which are then bruised in a mashing tub (a vessel like an inverted churn,) or passed through a small wooden mill, breaking the skins and pulp, but *not* the seeds. They are then emptied into the press, and the screw applied, until the pulp and skins are pressed dry, or all the juice is extracted. The outside of the cheese has to be cut off two or three times, and thrown on the top, and re-pressed, in order to extract all the juice. The juice or "must" as it is called, is then put into clean casks in a cool cellar, for fermentation.

Everything connected with the making of wine, requires great care and neatness. The press, vessels, and casks, must be perfectly clean; and, in short, as much attention to cleanliness must be observed, as in making butter, else the wine will lose the fine *fruity aroma and flavor of the grape*, which is to give it *character and make it sell*.

It is now generally admitted that *steaming the grapes*, is a great advantage to the wine. The writer has adopted a cheap and simple method, which answers the purpose very well:—A wire screen of an oblong square form, with meshes of three quarters of an inch, is placed to slide on a slight frame, over a large receiving tub; on this screen the mashed grapes are poured from the mashing tubs,—with a few vigorous slides and shakes, the pulp and skins fall through the sieve, leaving the stems on its sur-

face. The stems comprise about one-tenth of a measured bushel of unstemmed grapes.

The "pummies" (skins and seeds after being pressed) is thrown on the manure pile; or, distilled, to make brandy.

Mr. Longworth says, "To insure success we must observe great care in selecting the fruit. Select good sweet casks, and use cleanliness in expressing the juice, and skill in the process of manufacture and preservation of the wine. Keep it in a cool cellar, cask tight, and carefully rack the same yearly, till the wine is perfectly fine, and fit for bottling; for wines, that have no alcohol added, require tight casks and cool cellars, to keep them sound. They are less subject to run into the acetous fermentation with us, than they are in France and Germany.—To the ropiness of which they complain, our wine is not subject. It is a common saying in France and Germany, that 'a poor man cannot make good wine.' The reason is obvious. The rich man has not only more influence in obtaining favorable opinions, but he also uses more care and skill in the manufacture. The poor man must sell his wine as soon as made. The rich man retains it till it is improved by age, and never sells any under his own name, but that which proves to be of superior quality. The vintage of bad years, is sold without a name. So much depends on manufacture and reputation in Europe, that wine from the same variety of grape, and the vines divided by a footpath in the same vineyard, have very different reputations.—The one will bring eighteen dollars per dozen, where its neighbor will not command three dollars. Many commence the manufacture at the lowest price, and in a few years, by great care and skill, command the highest."

FERMENTATION.

This process as generally pursued, is very simple. The casks are filled up within five or six inches of the bung, and the bung put on loosely. The gas escapes without the wine running over. Usually, in two to three weeks, the fermentation ceases, and the wine becomes clear; then *fill up* the casks and *tighten* the bungs.

In February or March, rack off the wine into clean casks and bung tight.

A second, but moderate fermentation, will take place late in the spring; after that the wine fines itself, and is ready for sale; and if the casks are kept well filled, and the bungs tight, it will improve by age for many years. *Use no brandy or sugar*, if the grapes are sound and well ripened.

Since the above was written an improvement has been adopted by many, in the fermentation of wines. When the must is put into the cask, and the cask filled within an eighth or tenth of its capacity, (to leave room for fermentation)—a tin syphon is fitted

tight into the bung, with the end of the tube in a bucket of water, thus permitting the gas to escape through the water, without the wine coming in contact with the atmospheric air. Some of the strength and of the fruity aroma is thus retained in the wine, that would otherwise escape by exposure in the methods formerly pursued.

The safest method of keeping this wine is in bottles, well corked and sealed, and laid on their sides in a cool place.

The fewer rackings it receives, and the less it is exposed to the air, the sweeter and better it will keep; retaining the fine aroma and flavor of the grape, and acquiring but little acidity. It will do to bottle in about a year after it is made, but two years would be better. *Never bottle before the second fermentation.*

Persons desirous of making a variety of wines from the same grape, may do so by adopting the following methods: The juice, or "must," that runs from the mashed grapes, as poured on the press, is put into one cask—that which comes from the *first pressing*, into another, and the juice obtained by the *second and last pressing*, into a third cask—the quantity of must in each will be about equal, and the wine different in *quality*, as *in the order* above stated. A fourth variety may be made of a rich claret color, by *fermenting in the skins*; and by a greater or less fermentation the *quality* may be varied. These last will be too rough and astringent, when new, to suit the public taste, but will become rich and palatable when mellowed by age.

The common practice is to put all the must together in the same cask, believing that the whole of the juice of the grape is required to make a fair average wine.

This has been the custom with the writer, except that the *last pressing*, being weak and astringent, is mixed with the must of the refuse grapes, and sold as an inferior wine—usually at half price.

The quality of wine differs with the seasons, a warm, dry summer and autumn are more propitious to maturing the grape than a wet one, hence the variation in wines of different vintages.

CURE FOR BURNS.—A new cure for burns is noticed as infallible by *Les Mondes*:—The affected part is kept under water in a basin, or a bath, the negative pole of a Volta-Farradaic apparatus is put in communication with the water, while the positive pole communicates with some part of the body out of the water and near the injury. The patient feels no pain, and the inflammation is subdued, generally in an hour. When the whole person has been in flame, the patient must be put into a bath, with the negative pole in the direction of the feet, and the positive one touching the nape of the neck. Some of the water must be changed every fifteen minutes to prevent it becoming warm.

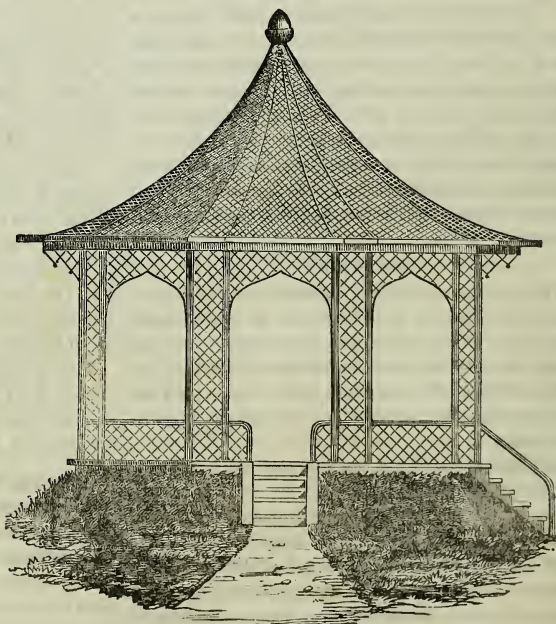
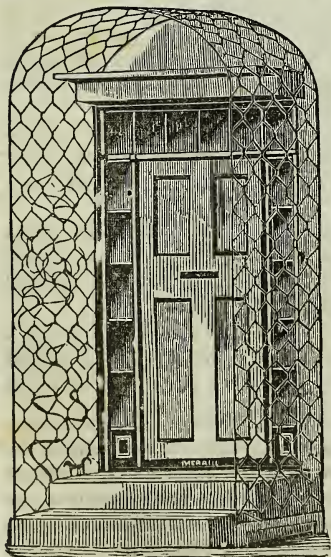
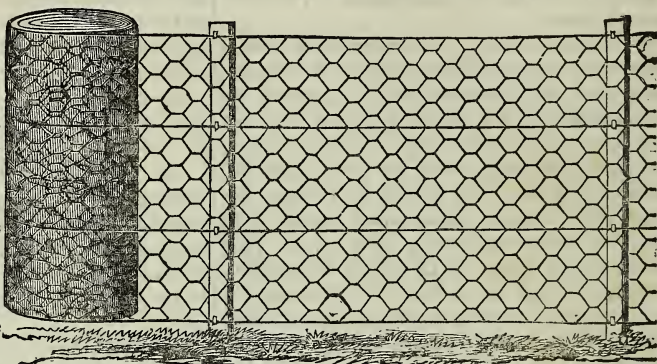
WIRE FENCING.

The perfection to which the manufacture of wire fencing and woven-wire for ornamental purposes has been brought of late years, through the instrumentality of machinery, is not less remarkable than its economical value, in those sections of our country where wood is scarce, and also wherever a light and

inconspicuous fence or dainty trellising for flowers & climbing plants are required. This new species of fencing was first introduced to the public by the Lowell Wire Fencing Company, whose patent, together with the exclusive right to construct and use the machinery, has recently been purchased by other parties.

The efficiency of woven wire for the purposes already indicated, has been so completely demonstrated, that this article in its various forms and of a thickness and size of mesh in accordance with the object for which it is designed, has already met with a large

demand. Wire netting, of which the above is a specimen, forms an elegant fence, is strong, close, durable, and not at all affected by high wind or driving snows. There is another mode of constructing a wire fence for small country places, or dressed grounds, which, though more costly, forms an exceedingly light, yet perfectly secure, enclosure. The difference in the latter mode of using the woven-wire consisting in straining it upon a frame composed of a top and bottom rail, between posts planted at eight feet distance from each other. The posts and rails, as we have seen them, being painted a dark green, and the wires covered with a black varnish. But for ornamental purposes the woven wire, in the shape of arbours, trellises, summer houses, &c. will be found particularly useful. The following cuts represent some of the forms in which the wire can be employed. We have first a door arbour, which, when covered with honeysuckles,



climatis, or climbing roses, would give, in the absence of a porch, a graceful adjunct to the entrance way. We have also a cut of a summer house of an oriental pattern, constructed, with the exception of the frame, of the same malleable and airy material.

We call attention to these different forms into which wire is now woven, not only because we regard the introduction of this novel but almost indestructible manufacture as solving the great problem in regard to fencing in the immense tracts of untimbered lands in the Western States; as providing an excellent substitute for the old fashioned fence in the older States, and as being of great service in the way of decorative ornamentation around the villa and the homestead.

Ladies Department.

ECHO POETRY.

The following from the Boston Transcript, is a specimen of echo poetry which possesses merit as a literary composition, and on account of the spirit of piety which breathes through it:—

If any be distressed, and fain would gather
Some comfort, let him haste unto

Our Father,

For we of hope and help are quite bereaven
Except Thou succor us

Who art in heaven,

Thou showest mercy, therefore, for the same
We praise Thee, singing

Hallowed by Thy name.

Of all our miseries cast up the sum;
Show us thy joys, and let

Thy kingdom come.

We mortal are, and alter from our birth!
Thou constant art,

Thy will be done on earth,
Thou madest the earth as well as planets seven,
Thy name be blessed here

As 'tis in heaven,

Nothing we have to use or debts to pay,
Except Thou give it us.

Give us this day

Wherewith to clothe us, wherewith to be fed,
For without Thee we want

Our daily bread,

We want, but want no faults, for no day passes
But we do sin—

Forgive us our trespasses,

No man from sinning ever free did live;
Forgive us, Lord, our sins,

As we forgive,

If we repent our faults, Thou ne'er disdainest us;
We pardon them

That trespass against us;

Forgive us that is past, a new path tread us;
Direct us always in thy faith,

And lead us—

We, thine own people and thy chosen nation,
Into all truth, but

Not into temptation.

Thou that of all good graces art the giver,
Suffer us not to wonder,

But deliver

Us from the fierce assaults of world and devil
And flesh, so shall thou free us

From all evil.

To these petitions let both church and laymen,
With one consent of heart and voice, say
Amen.

TO EXTRACT THE ESSENTIAL OIL FROM ANY FLOWER.
Take any flowers you like, which stratify with common salt in a clean earthen glazed pot. When thus filled to the top, cover it well and carry it to the cellar. Forty days afterwards, put a crape over a pan, and empty the whole to strain the essence from the flowers by pressure. Bottle that essence, and expose it four or five weeks to the sun to purify. One single drop of that essence is enough to scent a whole quart of water.

UNDER THE MISTLETOE.

A Story of Two Christmas Days and two Kisses.

BY THE AUTHOR OF "A DAUGHTER OF EVE."

I am an old man; so old am I that, looking back, life seems so very long, and yet so very short, that I do not quite know whether many things did not happen in a dream. I am hale and hearty, and merry, for the matter of that; and when I laugh my laugh rings out clearly and loud, they say; so much so that it makes the people around me, especially my grand-children and nephews and nieces, laugh too. And when I laugh the old times come back when others, who are silent now, laughed with me, and then I am suddenly still, and the laugh dies away; and when I think of it, its empty echoes fill my brain just as if it were sleep-laughter in a dream.

Been in love? Yes, I should think I have; how else could I have grand-children, those people who laugh so well and heartily when I laugh, and make me tell how old I am a score of times, and say how well I am looking! Well, Well; some of them want me to look ill, I think; but I'll laugh and live to spite 'em. No, no; I don't mean that, you know.—How can I live but as long as I have breath? and breath and life are in the hands of One greater than us all.

Been in love! I think I was talking of that, was I not? Yes been in love! Well, we just did love when I was a young fellow, and I recollect my wife, my Alice, that left my side just now, it seems, and yet it's twenty years ago; and I recollect her, as I loved her, when she was very young, and as I love her now. She was a merry one, was Alice; we used to walk, and laugh, and talk together like two friends. I think that she could do anything but drink and smoke, or tell an untruth, or do a wrong action. Her face was a sweet oval face; her hair was a very dark brown, nearly black, and her eyes a deep blue; full of merriment at one moment, ay, at all moments, except when she heard a sad story, or was touched with pain for any one else, and then they grew deeper and deeper as they filled with tears. Not for herself. She never cried for herself that I know of, for she never had a day's illness. But she was terribly cut up when her poor brother died, and that you see is how I knew her. Her brother was my right hand man in my company. Many's the time that he stood shoulder to shoulder with me, good at drill, good at a song—good at anything. He used to live near the coast; and, indeed, he joined us, and I was one of his tent-fellows, and his chum. Well, he knew people that I knew, and we were soon friends; and he took me home to show me Alice. He was always talking about her, and she about him; and when he was

there, scarce a look did she give me. Her brother Joe—his name was Joe, and mine, too—could do everything, and was the be-all and end-all of the world, I used to think; and so one day I tried to run with Joe, and Joe beat me, and Alice laughed; and then I shot against Joe, and he beat me too, and she laughed the more; and I wrestled with him and threw him, and she didn't laugh then, but ran to see whether he was hurt, and said it wasn't fair for Joe to tackle a big fellow like me, although he was nigh an inch taller. In short I could not please her any how.

Well, it was one day when we heard that the flat-bottomed boats of old Boney were *not* coming over, and that the army of Boulogne had melted bit by bit away, like a snowdrift, that we made a night of it. Ay, it was a night, too! and, being hot and in the summer, we must needs keep up the fun till the sun came up over the seacoast looking red and angry at our folly. Well, Joe and I—the two Joes, as they called us—ran down to the beach and washed our hot faces, and plunged in the fresh, salt waves, and were in a few moments as fresh and as merry as young larks. And after dressing, Joe must needs take a walk with me—who was nothing loth, you must know—along the cliff. The seas for centuries have been washing that chalk-bound coast, and at intervals there stand up pillars of chalk, with the sea around them, and with little green patches of land, a few yards square, on the top of them. The people call such a place "No Man's Land," and no man can own it, truly. Well, Joe came to one of these, a few feet—say twelve—from the cliff, and turning to me, he said, "Joe Junior," said he—I think I see his bright face now, "I challenge you to leap upon that "No Man's Land," I do!"

"Joe," said I, hurriedly, "don't be a fool! It may be it would give way at the top, and if it did not how could you jump back without a run? You'd be stuck a top there, like a mad sentinel or a pillar saint. I am not going to jump it."

"But I am!" said he. And, before I could hinder him, if indeed I had tried, he took a run and jumped.

It was so sudden that I could only stand aghast when I saw him there. He stood, indeed, but for a moment, then he took a step back, and would have jumped back, when I heard a rumbling sound, and half the top of the "No Man's Land" parted, and the chalk and earth, and Joe too, fell down with a crash upon the rocky coast below.

I ran round the little creek to the other side of the small bay, and throwing myself down upon the surf, stretched my neck over, looked out, and cried out—

"Joe! Are you hurt, Joe?"

A faint voice came up, and I could see the poor fellow struggling under a huge piece of chalk which seemed to hold him down in agony. He smiled in a ghastly way, with his whitened, face, and said—
"Run, Joe, Run! *The tide's coming in!*"

Well, I did run; and we got ropes from the tents, and a few strong fellows held these as I swung over the cliff, just reaching poor Joe as the cold sea-water was lap, lap, laping up to his mouth, taking away his breath, and then running back, crawling over him, and leaving bubbles of salt foam, as if in sport. I got him out, but he could not stand. Some bones were broken, and he was sadly bruised; so that I was forced to tie him to a rope, and they hauled him up, and afterwards pulled me up, and we took him home.

Well, well! to make a long story short, poor Joe died, with my praises on his lips, and poor Alice bowed her head like a broken lily. It was a long time before she got over it, and the summer had grown into winter, winter to summer, to autumn, and winter again. The threatened invasion was all over; our swords were getting rusty, our uniforms dusty, and when the holidays came I left the arm in which I had just become a partner, and went to spend a fortnight at my old friend's in Kent.

Alice was there, well and cheerful now, and reconciled to her loss, though we often talked of poor Joe; and as the days wore on we grew closer together, and she called me by my name, and seemed to have transferred her brother's love to me. She never told me so, nor let others see it till one merry Christmas night, when she rejected all her cousins and her other friends, and would only dance with me.

We had the mistletoe, too. At last, one mad cap fellow proposed that the ladies should kiss the gentlemen all round when and how they could; and Alice and I, who had subsided into solemn talk, and were speaking of poor Joe, were surrounded, and it was insisted that Alice should play too; and she, in a solemn, quiet way, smiling sadly and yet sweetly, took me beneath the Christmas bough and kissed me on my lips.

Ay, it's many years ago, but I feel it now. My heart beat so fast, that I hardly dared return it; but I put my arm around her, and took her gently to the bay window of the old hall, saying, as I pressed her hand—

"Alice, dear Alice, did you *mean* that kiss?"

Well, I need not tell you what she answered, 'tis fifty years ago—fifty years ago! and I am surrounded by Alice's dear grandchildren: and there is one, a little thing with light and golden hair that will deepen into brown, who plays around my knees and tells me her little stories, her sorrows, and her joys;

so quick, so sudden, so hurried in their coming and their going that they are like my own, and, as we talk, we grow quite friends and companions, like my Alice was to me.

Bless you, she understands it all ! She is a woman in her pretty ways ; her poutings and quarrellings. She manages her household of one wax doll and two wooden ones, and tells me, for the wax doll is the lady and the wooden ones are the servants in mob-caps and stuff-gowns, when they are impudent and do not work, and when they gossip with a wooden policeman, who belongs to her brother, little Joe.

So we are fast friends, little Alice and I ; and to-night, on Christmas night, I noticed that she would not dance nor play with the pink and shiny faced little boys who were so unnaturally tidy and clean in their new knickerbockers with red stockings ; but she came and sat by me and talked softly in the firelight as Alice did, and made me think of fifty years ago. And only think how old times come back and new times like the old ; only just think that when her mother told her she should choose a sweetheart, she got a little bit of mistletoe, and climbing slowly on my knee, holding me in talk as if to hide her purpose—though I guessed it soon, I'll tell you—she put her doll-like arms around my neck, and holding the mistletoe above my head, she kissed me again and said I was her sweetheart.

So this child sweetheart brought the old times back—the old times that were so distant and so near ; and with sweet kisses 'neath the rustling leaves made me think of my dead Alice in the grave. The first kiss and the last ; the last and the first, and of all days in the world on Christmas Day.

—♦—♦—♦—

YOUR MOTHER.—Children ought to love, obey and honour their parents. Let your mother, in particular, who, in your tender years, has the more immediate charge of you, be on earth the most sacred object of your affections. Let her be your friend and chief confidant. Conceal nothing from her, but make her acquainted with the company which you keep, the books which you read, and even the faults which you commit ! Happy is the son, and particularly the daughter, who are not afraid to communicate to their mother their most secret thoughts.—Whilst they remain thus artless and undisguised, they are free from danger. Children, obey your parents in youth ; but whenever you are no longer under their care, let not your reverence abate. If by the providence of God you should rise above them in the world, grow not ashamed of them.—While they are bending under the infirmities of old age, still continue to treat them with respect as well as affection.

The Florist.

FLORICULTURE—March, 1864.

Communicated for the "Farmer and Mechanic," by W. D. BRACKENRIDGE, Florist and Nurseryman, Govanstown, Baltimore County, Md.

The sun now getting higher, and the days longer, exercises a powerful influence on plants under glass, particularly after the cold winter just past, during which an extraordinary amount of fire heat became necessary, in order to repel the severe frosts,—a favourable opportunity for admitting air seldom presenting itself. It will therefore be observed that under so long close confinement, soft wooded plants have become drawn up and weakly, particularly if they have been situated far from the glass ; when such is the case, it is wise to pinch the tops off such sorts as will produce flowers on their lateral branches. This operation will retard the season of blooming, but in course of time bushier plants will be obtained. Under such circumstances we never hesitate at this season of the year to pinch back *Salvias*, *Fuchsias*, *Pelargoniums*, *Verbenas*, *Lantanas*, and such like soft wooded plants, that is, if they have not already shown their flower buds ; but some species, if shortened back at this stage, may not produce flowers the same season.

During the present month, the Greenhouse or Conservatory should present a gay appearance with Chinese Primroses, Camellias, Azaleas, Hyacinths, Chorozeas, Acacias, Epacris, and other New Holland plants. Observe on all mild conditions of the weather, to admit air freely, and see that this is attended to in the early part of the day, or before the temperature gets too high from the effects of the sun's rays, and then mind to close up in the afternoon before the house becomes cold ; better to shut in a little of the sun's heat, than to raise the temperature by fire.

Cinerarias should be kept near the glass, giving them a liberal supply of water, and successive plants now shewing their flower stems, should be shifted into pots in which they are to bloom, guarding against their great enemy—the green fly, by fumigating frequently with tobacco. If there are any choice varieties from which you wish to save seeds, set them by themselves while in bloom, where they will receive abundance of air, and be free from the influence of the pollen of the common sorts. In this way, with a little care, a great improvement may be effected on the existing varieties of this beautiful and easily cultivated plant. Herbaceous Calceolarias require pretty much the same treatment as the last, only a little more care is necessary in bringing them forward, being more tender in their foliage,

and more subject to the attacks of insects; they also require a little more shade, with a free circulation of air about them. Pelargoniums will now be opening their flowers. Keep tying them out to their stakes, as they grow, so that both the flowers and foliage may stand free of each other—give air freely in mild weather, but be careful and not over water at the roots. Give a partial shade to your Camellias when in bloom, and until they have finished making their growths, and during the same period they will require a more liberal supply of water, than at any other. Azaleas will flower well in the same house as the last, only they require less shade after they have done flowering, at which time, such as require it, may be shifted into larger pots. Young plants in small pots so soon as they begin to grow, should be moved into larger ones. Pot off cuttings put in last month of Heliotropes, Verbenas, Lantanas, Petunias, Pelargoniums, &c. Also prick out in shallow pans or boxes all seedlings of tender annuals so soon as they become large enough to handle, keeping them in a close warm atmosphere until such time as they have taken with the earth. Cut back your Acacias well, after they have done flowering, so that they may form nice bushy heads—and all seedlings of New Holland and Cape of Good Hope plants, should be potted in what is called thumb pots, before they become matted together in the seed pan. Pot a few more Achimenes roots, and shift into larger ones, those started last month—give them a warm position, where the atmosphere has a tendency to humidity. Chrysanthemums may be propagated this month, either by division of the roots, or from tips of the young shoots of such as have made growths. Dahlias for propagation may be potted—or the roots placed on a moderately warm tan bed, covering the roots with light earth, so that the crowns stand bare above the surface.

If your hot-beds have become chilled by the cold weather, a lining of warm stable manure, about 2 feet thick, should be placed all around them, but previous to building this, horizontal holes ought to be made into the bed with a round stick, so that the heat from the lining may the more readily penetrate and warm up the whole; during the month, Rose bushes and Shrubs ought to be pruned, and the borders loosened with a strong fork, which is much better than a spade. When this work is completed, a good top-dressing of woods earth or well rotted stable manure should be applied as a mulch. If your lawns were not top-dressed in the fall, it may yet be done with advantage—old manure is good, but wood ashes or lime would be better. Where moss has begun to interfere with the grass, a few weeks after the dressing has been applied, the whole surface should be gone over with a strong rake, and this should be followed by the roller. Pare the grass

edgings, clean and surface such walks as want it with fresh gravel. Have your hedges cut during wet weather, and push all such work forward as soon as possible, so as not to interfere with the planting season.

ABOUT ROSES.

A correspondent of the *Culturist* writes to that journal concerning the care and treatment of roses. As the season of this beautiful nymph of Flora is rapidly approaching, our readers will doubtless find much advantage from perusing the letter which we here append:—

“Everybody loves the rose, and almost every one desires to possess information that will tend to give the greatest possible effect to this pet of the garden and conservatory. It is not as well known, perhaps, as it might be, that to have roses in full perfection of size and color, proper planting and exposure are absolute essentials. The rose requires abundance of air and light, and to look their very best I think that judicious grouping is indispensable. I know no way of accomplishing this more effectually than by pyramidal grouping, that is forming a rose pyramid, rising gradually in height from the minutest dwarf at the base, to the tallest standard at the apex. As the varieties are almost endless, it would be impossible to enumerate them. Almost every florist's catalogue will supply the list, and the taste of the operator direct the arrangement. A proper discrimination should of course be manifested in regard to the time and continuance of blooming, so as to secure the finest possible effect. I once read of a very simple method of imparting a stronger and more agreeable odor to the rose. It is done by planting one or two large onions close to the root. It is said that water distilled from roses grown under such circumstances is decidedly superior to that prepared from ordinary rose-leaves. It is a French idea, and as it will cost little to try it, perhaps some persons may feel disposed to experiment on it.”

SUBSTITUTE FOR GLASS IN HOT BEDS.—Take fine white cotton cloth and cover the frames. To render it transparent and impervious, it is covered with the following preparation, viz: 4 oz. of dry pulverized white cheese; 2 oz. of white slacked lime; 4 oz. of boiled linseed oil. Mix these well, and add 4 oz. of the whites of eggs, and as much of the yolks, and the mass is made liquid by beating. The application is similar to varnishing any other article.

Transactions of the Massachusetts Horticultural Society for 1863.—We have received a copy of these Transactions containing highly interesting reports from the committees on Flowers, Fruits, Vegetables, &c., with the Address of C. W. Hovey, Esq., President of the Society, together with the premiums and gratuities awarded.

CULTIVATION OF SORGUM IN BALTIMORE COUNTY.—

There is no doubt but the soil and climate of this county is admirably adapted to the production of Sorghum or Chinese sugar cane, and that its cultivation is highly profitable. Mr. James Bruster, of Worthington Valley, planted four acres with it last season. It was a very poor year for its development, the season being dry and the frost coming early. With this drawback, he produced, on the four acres, 700 gallons of most excellent syrup, which he is now retailing on his farm at 80 cents per gallon. He says it is no more trouble or expense to raise it than to raise corn, and that it will pay, with a fair average, twice as much. A number of other farmers in that vicinity tried the experiment last year, and they will extend their operations in 1864. Mr. Bruster used the Cook Mill and Evaporator.

VINE CULTURE IN MARYLAND.—Although the culture of the vine is yet but fairly commenced in our neighborhood, it is sufficient to say that the business is already prosperous and remunerative. The quantity produced last year may be set down at about three thousand gallons, which new juice finds a ready sale at \$1.50 per gal. Experience has demonstrated that the hills around Cumberland are well adapted to the culture of the grape, and some of the varieties produced are of the finest kind, yielding a wine not excelled by any other locality in this country.—*Cumberland Civilian*.

GLANDERS AMONG HORSES.—This disease among horses is quite prevalent in parts of New Jersey, and has attracted the attention of the farmers. On Thursday last a meeting citizens of Burlington county was held for the purpose of adopting measures to arrest the spread of the glanders among horses, which it was said was introduced by the recent sale of condemned government horses. Prof. R Jennings addressed the meeting, proving the contagious character of glanders, its communication from horse to horse, and from horse to man, showing from statistics the death of over two hundred human beings from glanders alone, communicated from the horse. These were principally horse shoers and hostlers. After which a committee was appointed to have a bill prepared and presented to the State Legislature now in session, to prevent any person or persons from exposing in any street, road, or public place, or offering for sale, or keeping in his or their possession, or on his or their premises, any horse, or other animal afflicted with glanders, &c.

The new firm of Robert Halliday & Son, offer to the public a large and varied assortment of Fruit and Ornamental Trees, Vines and Plants, Shade Trees, &c. City place, corner Penna. Avenue and Dolphin Street, Baltimore, where samples can be seen.

INFLUENCE OF RAIL-ROADS UPON THE VALUE OF FARMS.—The progress of our agriculture is seen in the tables of the late Agricultural Report, representing the cash value of farms. Their increased value is evidently greater than the augmentation of the crops would justify. That the farmers have given much of their gains to make railroads and other commercial highways is known to those familiar with the progress of these roads. This investment has been returned to them, as is demonstrated.—The increased value of farms has been 103 per cent. or \$3,370,534,976. A similar increase from railroad investment will be found also in the great increase of the value of stock and crops. Distant markets have been brought near, and hence both lands and their products have advanced in value beyond the amount of improved acres and of stock and crops. Nothing so clearly demonstrates the value of railroads to the farming community as these statistics. No investments could have been more advantageous to it, although it may never pay a direct dividend.

THE APPLE TREE BORER.

Dr. Asa Fitch, the State entomologist of New York, has written the following article in the *Register of Rural Affairs*. In reprinting it, we may add that Dr. F. is one of our first entomologists, as well as one of our most practical horticulturists:

"To repel this beetle from depositing its eggs upon the bark, the tree the latter part of May should be rubbed with soft soap, or have some other alkaline substance applied to it. Five years ago I treated half my young trees in this manner, and the following spring not a borer could be found in any of them, while of those to which soap was not applied, the major part had young borers a quarter of an inch long in them, fifteen of these worms being found in a single small tree. I have continued to apply soap to the same trees each year since, but have occasionally found borers in some of them. I am inclined to think, if soap is applied the latter part of May, and repeated if copious rains occur to wash it off before the end of June, the trees will never be attacked by this insect. Dusting the butts of the trees thickly with air-slacked lime bids fair from experiments which I have recently commenced, to be more efficacious than the soap. If, notwithstanding these precautions, any worms become established at the root of the tree, they should be immediately ferreted out and destroyed. This can be done much more easily when they are young and small, as they are then lying in or directly under the bark."

Mink Skins, now worth from \$4 to \$7 each, were formerly heavy in the market at a "half dollar" a piece.

TWELVE WAYS OF COMMITTING SUICIDE.

1. Wearing thin shoes of damp nights and in cold rainy weather. Wearing insufficient clothing, and especially upon the limbs and extremities.

2. Leading a life of enfeebling, stupid laziness, and keeping the mind in an unnatural state of excitement by reading romances. Going to theatres, parties and balls in all sorts of weather in the thinnest dress. Dancing till in a complete perspiration, and then going home without sufficient over-garments through the cold, damp air.

3. Sleeping on feather beds in seven by nine bedrooms, without ventilation at the top of the windows, and especially with two or more persons in the small, unventilated bed-room.

4. Surfeiting on hot and very stimulating dinners. Eating in a hurry, without half masticating your food, and eating heartily before going to bed every night, when the mind and body are exhausted by the toils of the day and excitement of the evening.

5. Beginning in childhood on tea and coffee and going on from one step to another, through chewing and smoking tobacco, and drinking intoxicating liquors, by personal abuse and physical and mental excesses of every description.

6. Marrying in haste and getting an uncongenial companion, and living the remainder of life in mental dissatisfaction. Cultivating jealousies and domestic broils, and being always in a mental ferment.

7. Keeping children quiet by giving paregoric and cordials, by teaching them to suck candy, and by supplying them with raisins, nuts and rich cake. When they are sick, by giving them mercury, tartar emetic and arsenic, under the mistaken notion that they are medicines and not irritant poisons.

8. Allowing the love of gain to absorb our mind, so as to leave no time to attend to our health. Following an unhealthy occupation because money can be made at it.

9. Tempting the appetite with bitters and niceties, when the stomach says "No," and by forcing food when nature does not demand and even rejects it. Gormandizing between meals.

10. Contriving to keep in a continual worry about something or nothing. Giving way to fits of anger.

11. Being irregular in all our habits of sleeping and eating, going to bed at midnight and getting up at noon. Eating too much, too many kinds of food, and that which is too highly seasoned.

12. Neglecting to take proper care of ourselves and not applying early medical advice when disease first appears. Taking celebrated quack medicines to a degree of making a drug shop of the body.

Envy is unquestionably a high compliment, but most ungracious one.

THE FROST AND THE FRUIT TREES.—According to certain accounts, the recent severe frosts have entirely destroyed the fruit-buds on the peach trees in the West, and the apple trees have suffered severely. Representations are, however made by parties, who assert their personal knowledge of facts that both the above statements are incorrect, and that, under the usually favourable circumstances, the peach crop of the West will be a good one next year.

DUTCH METHOD OF PRESERVING MILK FOR A LONG VOYAGE.—Take any number of bottles you wish to have filled, scald them thoroughly, turn them upon the nose in the sun until they are perfectly dry; then milk from the cows into the bottles, and cork them tight; the bottles are then put in a kettle, packed with straw or hay, and water poured in until they are covered. After being boiled, the milk is fit for use, and may be preserved sweet for months.

To save a multitude of conjectures as to the course of the wind and the temperature of the weather, provide a weather cock and a thermometer. The first any farmer can make and put up on some elevated part of his buildings; or he can buy, of every conceivable pattern, at our Agricultural Warehouses at a trifling expense—the last can be purchased for a trifle, and will be found useful in more ways than one.

RECEIVED.

From Bruster & Griffith, Baltimore, pamphlets on Buckeye Mower and Reaper for 1864, and Buckeye Horse Rake. Copies can be had at our office.

From R. D. Fitts, Agent, Philadelphia, pamphlets of Agricultural Chemical Company.

From John S. Reese & Co., Baltimore, pamphlet on Phospho-Peruvian Guano and "Moro Phillips" Superphosphate of Lime.

From Griffing, Brother & Co., New York, Agricultural Almanac for 1864.

From Bowen & Mercer, Baltimore, the Farmer's Almanac for 1864, containing testimonials as to Poudreite.

From R. L. Howard, Buffalo, New York, Howard's Almanac, descriptive of agricultural implements, &c.

From Tabers & Co., Salem, Ohio, pamphlet on Quaker Mower and Reaper (*Stetson's* patent.)

From Bullard & Atkins, "Bullard's Horse Car, Railroad, Steamboat and Business Guide" for Baltimore, published monthly, and circulated gratuitous for the benefit of advertisers.

From Edward J. Evans & Co., Central Nurseries, York, Pa., catalogue No. 1, Fruit and Ornamental Trees, Shrubs, Vines, Roses, &c.—No. 2, descriptive of Native Apples—also catalogue of Dahlias, Chrysanthemums, Fuschias, Verbenas, &c. Copies of each are on our table for distribution, or can be sent by mail if requested.

From R. Sinclair, jr. & Co., Light street, Baltimore, their large pictorial catalogue of Plows, Machinery, Tools, Seeds and Plants.

From Down & Co., Seneca Falls, New York, catalogue of Force and Lift Pumps, Garden Engines, &c.

From Geo. Davenport & Co., Boston, pamphlet on Ammoniated Pacific Guano.

From J. Wesley Jones, Chatham 4 Corners, Columbia Co., New York, catalogue of Choice Flower and Garden Seeds, including the Novelties of this season.

PATENT CLAIMS

ISSUED FROM THE U. S. PATENT OFFICE,

(APPERTAINING TO AGRICULTURE.)

From the 7th January, to 9th February, 1864.

FROM THE SCIENTIFIC AMERICAN.

41,188.—Grain Separator.—Myron J. Barcalo, Mount Morris, N. Y.

41,193.—Churn.—Edgar Chipman, New York City.

[This invention consists in the employment of a rocking or oscillating cream box provided with weights or counterpoises, and also provided with rotating agitators having cells or chambers.]

41,195.—Sugar Evaporator.—R. S. Cole, Mount Pleasant, Iowa.

41,196.—Cow Milker.—L. O. Colvin, Philadelphia, Pa.

41,199.—Grain Drill.—T. R. Cornick, Independence, Iowa.

41,215.—Grain Cradle.—A. P. Goyer, Eureka, Wis.

41,216.—Sheep Rack.—Robert Hale, Fitchburg, Mass.

41,232.—Grain Separator.—Harrison Ogborn & John W. Free, Greens Fork, Ind.

41,253.—Apparatus for Evaporating and Refining Sugar, J. E. Youngman, Rockford, Ill.

41,263.—Corn Planter.—William F. Osgood, Lowell, Mass.

[This invention relates to a new and improved seeding machine for planting seed in either hills or drills. The object of the invention is to obtain a simple machine for the purpose specified, which may, by a very simple adjustment be made to plant the seed in either hills or drills, and also be very readily adapted for planting different kinds of seed or seed of different sizes.]

41,270.—Horse Rake.—Lorenzo Beach, Montrose, Pa.

41,271.—Cheese Curd Cutter.—Horace A. Blakeman, Cuyler, N. Y.

41,273.—Grain Dryer.—Caleb H. Booth, Dubuque, Iowa.

41,275.—Fiber from Flax, Hemp, &c.—Hugh Burgess, Rogers Ford, Pa.

41,276.—Disintegrating or Cottonizing Flax, Hemp, &c.,—Hugh Burgess, Rogers Ford, Pa.

41,287.—Grubbing Machine.—J. H. Flanigan, Chicago, Ill., and Wm. Laning, Stoughton, Wis.

41,301.—Concentrated Feed for Horses, &c.—George Jaques, of Summerville, and D. F. White and John Stowell, of Charleston, Mass.

41,314.—Cultivator and Seeder.—C. E. Miller, of Amelia, Ohio.

41,321.—Broad-cast Seed-sower.—J. R. Rogers, Berlin, Wis.

41,322.—Churn.—D. K. Price, Ossin, N. Y.

41,334.—Machine for Washing Wool.—C. G. Sargent, Graniteville, Mass.

41,336.—Horse Rake.—D. P. Sharp, Ithaca, N. Y.

41,338.—Churn.—W. Slaughter, Westerville, Ohio.

41,339.—Whiffle-tree Attachment.—Ephraim Soper, New York City.

41,331.—Artificial Manure.—Eugene Von Nordhausen, New York City.

41,346.—Corn Planter.—Joseph Olmstead, Knoxville, Ill.

41,371.—Plowing Machine.—D. D. Foley, Washington, D. C.

41,377.—Machine for binding Grain.—S. T. Holly, of Rockford, Ill.

41,378.—Machine for binding Grain.—S. T. Holly, Rockford, Ill.

41,383.—Reaping Machine.—J. B. McCormick, St. Louis, Mo.

[This invention consists in the employment or use of an automatic rake arranged to operate in such a manner as to deliver the grain at one side of the rear of the machine, in combination with a gavel receiving table and a binder's platform or stand.]

41,384.—Harvester.—John C. McDougal, Black Rock, N. Y.
41,398.—Manufacture of Sugar and Syrup from Sorghum, &c., J. F. Riggs, Fremont, Nebraska.

41,407.—Plow.—James Tomlinson, Racine, Wis.

41,411.—Harvester.—Henry Fisher, Alliance, Ohio.

41,416.—Machine for cutting Hay for Pressing.—Orson Waste & Charles Waste, Cameron, Ill.

41,423.—Cultivator.—Jarvis Case, Lafayette, Ind.

41,424.—Potato-digger.—Otis N. Chase, Boston, Mass.

41,428.—Restoring Phosphatic Guano.—Louis Harper, Brooklyn, N. Y.

41,433.—Horse Rake.—James Hollingsworth, Chicago, Ill.

41,435.—Cultivator.—M. H. Hullinger, Granville, Ill.

41,449.—Gang Plow.—Marshal Sattley, Taylorsville, Ill.

41,454.—Cultivator.—E. W. Vangundy, Galesburg, Ill.

41,460.—Mowing Machine.—Rufus Duston, Brooklyn, N. Y.

41,474.—Grain Drill.—James Bucknell, Decorah, Iowa.

41,477.—Harvester.—R. D. Brown, Covington, Ind.

41,479.—Harrow.—S. P. Campbell, Rochester, Minn.

41,484.—Horse Hay-fork.—D. B. Clement, Brooklyn, N. Y.

[This invention relates to an improved means employed for discharging the load from the fork and in an improved manner of attaching the tines to the fork head and also in an improved way of suspending the fork in its bail, whereby it is believed that several advantages are obtained over the forks hitherto used.]

41,485.—Revolving Vegetable-steamer.—Selah R. Collins, Lyndon, Mich.

41,487.—Cotton Gin.—T. C. Craven, Greenbush, N. Y.

41,490.—Stump-extractor.—D. A. Danforth, of Elkhart Ind.

41,491.—Gang Plow.—F. S. Davenport, Jerseyville, Ill.

[This invention consists in a novel and improved means for gaging the depth of the penetration of the plows into the earth and for raising them out of the earth when designed to be inoperative. The invention also consists in a novel and improved means for guiding the machine and turning it at the ends of the furrows.]

41,493.—Horse Power.—A. J. Detrick, Dryden, N. Y.

41,497.—Horse Collar.—Chas. J. Fisher, Waukon, Iowa.

41,499.—Horse Hay-fork. John S. Gage, Dowagiac, Mich.

41,503.—Construction of Hoes, Rakes, &c.—John S. Hall, West Manchester, Pa.

41,513.—Beehive.—Leonard Kennedy, Hartford Conn.

41,514.—Cider Mill.—Tobias J. Kindleberger, Springfield, Ohio.

41,520.—Wagon Spring.—Charles S. Martin, Mackford, Wis.

41,522.—Raking Attachment for Harvesters.—Albert E. McGaughey, Red Wing, Minn.

41,523.—Cultivator.—Patrick McGlew, Des Moines, Iowa.

41,525.—Churn.—S. H. Meredith, Oxford Ohio.

41,541.—Fence Post.—Charles R. Rmith, Haverhill, N. H.

41,542.—Drain.—George W. Smith, Springfield, N. J.

41,546.—Drill.—Wm. Stivers, New York City.

41,562.—Cultivator.—Joseph Wilhelm, Muscatine, Iowa.

[This invention relates to an improvement in that class of cultivators which are constructed with two wings hinged together and are ranged so that they straddle one row and that they can be expanded or contracted at pleasure, according to the width of the furrows through which the cultivator is intended to pass.]

44,566.—Harvester.—Alden B. Briggs, South Deerfield, Mass.

41,567.—Water Wheel.—Roswell R. Brooks, Weedsport, N. Y.

41,569.—Cultivator.—Arlon M. Cook, Chicago, Ill.

RE-ISSUES.—1,613.—Hay Elevator.—George W. Gregory, Binghamton, N. Y.

1,614.—Harvesting Machine.—Wm. N. Whiteley, Jr., Springfield, Ohio.

AGRICULTURAL BOOKS.

Constantly on hand and for sale an assortment of the standard books on agricultural, horticulture, &c., at the office of the "Farmer."

WASHINGTON AND THE CORPORAL.—During the American revolution, it is said, the commander of a little squad was giving orders to those under him, relative to a log of timber which they were endeavouring to raise up to the top of some military works they were repairing. The timber went up with difficulty, and on this account, the voice of the little-great man, was often heard, in regular vociferations of "Heave away! there she goes! heave ho!" An officer, not in military costume, was passing, and asked the commander why he did not take hold and render a little aid. The latter, astonished, turning round with all the pomp of an emperor, said, "Sir, I am a corporal!" "You are, are you?" replied the officer, "I was not aware of that;" and taking off his hat and bowing, the officer said, "I ask your pardon, Mr Corporal," and then dismounted, and lifted till the sweat stood in drops on his forehead. When the work was finished, turning to the commander, he said, "Mr. Corporal, when you have another such job, and have not men enough, send for your commander-in-chief, and I will come and help you a second time." The corporal was thunderstruck! It was Washington who thus addressed him!

BLANKETING HORSES IN WINTER.—This is often wrongly done. When the horse becomes heated by hard labor and long travelling, the blanket is thrown on his back at once, the vapor steams up from his hot sides, becomes condensed and wets the blanket, and as the horse continues to cool, the cold and wet covering is of little use. A better way is to allow the animal to stand uncovered for a few moments, (a longer or shorter period, according to circumstances) until cooled down to the ordinary temperature, but not in any degree towards chilliness: then throw on the dry blanket.

BUILD AN ICE HOUSE.—Any one who lives near a water course can, at an expense of \$10, build an ice house capable of containing a cube of the crystal luxury ten feet square. Rough boards for the outer wall, slabs for the inner, with a filling a foot thick of tan bark or saw dust, a layer of the same thickness upon the top; a clapboard roof, a drain to carry off the drippings from the ice, and then pack in the ice close and compact, cover it over with saw-dust, and the work is done. Such a store would furnish half a dozen families with hard butter, cold water, frozen custards, and all the luxuries of a first class ice cream saloon, for the whole season.

A Milwaukee paper says that when a Wisconsin girl is kissed, she looks surprised and says; "How could you do it?" to which the swain replies, "It will give me much pleasure to show you," and proceeds to give the duplicate.

IF YOU MEAN No, SAY No.—When a man has made up his mind to do or not to do a thing, he should have the pluck to say so plainly and decisively. It is a mistaken kindness—if meant as a kindness—to meet a request which you have determined not to grant, with "I'll see about it," or, "I cannot give you a positive answer now; call in a few days and I'll let you know." It may be said, perhaps, that the object of these ambiguous expressions is to "let the applicant down easy;" but their tendency is to give him useless trouble and anxiety, and possibly to prevent his seeking what he requires in a more propitious quarter until after the golden opportunity has passed. Moreover, it is questionable whether the motives for such equivocations are as philanthropic as some people suppose. Generally speaking, the individual who thus avoids a direct refusal, does so to avoid himself pain. Men without decision of character, have an indescribable aversion to say no. They can think no—sometimes when it would be more creditable to their courtesy and benevolence to think yes—but they dislike to utter the bold word that represents their thoughts. They prefer to mislead and deceive. It is true that these bland and considerate people are often spoken of as "very gentlemanly." But is it gentlemanly to keep a man in suspense for days, and perhaps weeks, merely because you do not choose to put him out of it by a straight-forward declaration?—He is only a gentleman who treats his fellow-man in a straight-forward, manly way. Never seem by ambiguous words to sanction hopes you do not intend to gratify. If you mean no, out with it.

A briefless young barrister says that any young lady that possesses a thousand acres of freehold land presents sufficient ground for attachment

BOOTS AND SHOES.

The undersigned respectfully calls the attention of Merchants and Farmers to his large assortment of **BOOTS AND SHOES, of every description,** Such as LADIES, GENTLEMENS, CHILDRENS, and SERVANTS, at Wholesale and Retail.

GEO. S. CLOGG,
No. 2 SOUTH CALVERT STREET,
m6t One door from Baltimore-st., Baltimore.

HORSE RAKE.

The REVOLVING RAKE is the best for Hay, and we have the best article of this kind that has ever been got up. Price at the present time \$12.

The WHEEL RAKE is the best for Grain, and may also be used for hay. We have now a good stock of both kinds, and farmers will do well to buy early.

E. WHITMAN & SONS,
24 S. Calvert street, Baltimore.

Reading Rooms of the "Farmer and Mechanic."

We have prepared a large and elegant Room in our Buildings, in connection with our office, as a Reading Room, for the benefit of our friends from the country, or the city, who may desire to avail themselves of its advantages, when leisure to visit us offers. We propose to have on file all the leading Agricultural Journals of this country, as well as some of the European—all the county papers of this State, many from the adjoining States of Pennsylvania and Delaware, together with Books on Agriculture and its kindred sciences—Catalogues of Implementation Manufacturers. Seedsman, Nurserymen, Fertilizers, &c., &c. The following is a list of papers now on file and to which we are constantly adding :

Rural New Yorker, Rochester, N. Y.
Country Gentleman, Albany, N. Y.
The Rural American, Utica, N. Y.
American Stock Journal, New York city.
American Agriculturist, New York city.
Scientific American, New York city.
Mercantile Journal, N. Y.
The Artificer, Seneca Falls, N. Y.
New England Farmer Boston, Mass.
Boston Cultivator, Boston, Mass.
Maine Farmer, Augusta, Maine.
Kennebec Courier, Bath, Maine.
Gardeners' Monthly, Philadelphia, Pa.
Farmer and Gardener, Philadelphia, Pa.
American Exchange and Review, Philadelphia, Pa.
Franklin Repository, Chambersburg, Pa.
United States Journal, Philadelphia, Pa.
Lancaster Intelligencer, Lancaster, Pa.
Rural Advertiser, Philadelphia, Pa.
Ohio Farmer, Cleveland, Ohio.
The Wool Grower, Cleveland, Ohio.
The Farmer's Home, Cincinnati, Ohio.
Rural Intelligencer, Indianapolis, Indiana.
Wisconsin Farmer, Madison, Wisconsin.
Valley Farmer, St. Louis, Missouri.
Iowa Homestead, Des Moines, Iowa.
Michigan Farmer, Detroit, Michigan.
Baltimore County Advocate, Towson, Md.
Baltimore County American, Towson, Md.
Cecil Whig, Elkton, Md.
Cecil Democrat, Elkton, Md.
Cambridge Intelligencer, Cambridge, Md.
Chester town Transcript, Chester town, Md.
Kent News, Chester town, Md.
Worcester Shield, Snow Hill, Md.
Southern Ægis, Belair, Md.
Harford Times, Harve-de-grace, Md.
Maryland Citizen, Centreville, Md.
The Prince Georgian, Upper Marlborough, Md.
Marlborough Gazette, Upper Marlborough, Md.
Civilian and Telegraph, Cumberland, Md.
Hagerstown Mail, Hagerstown, Md.
Maryland Union, Frederick, Md.

The fountain of true politeness is a good and generous heart. It consists less in exterior manners, than the spirit developed in conduct in the intercourse of society.

BALTIMORE MARKETS--FEBRUARY 29.

[Unless when otherwise specified the prices are wholesale.]

Coffee.—Very little doing in Rio but prices unchanged, common to prime grades commanding 36a36½ cents.

Flour.—The inquiry for all grades of Flour continues moderate, but prices show very little variation. We quote as follows:

Howard Street Super and Cut Extra.....	\$ 7.00	0.00
“ “ Shipping Extra.....	7.50	0.00
“ “ Retailing Extra.....	7.62½	7.75
“ “ Family.....	8.25	8.50
Ohio Super.....	6.87½	7.00
“ Shipping Extra.....	7.37½	7.50
“ Retailing Extra.....	7.50	0.00
“ Family.....	8.00	0.00
City Mills Standard Super.....	7.00	0.00
“ Shipping brands Extra.....	8.50	9.00
Baltimore Family.....	10.25	0.00
“ High-grade Extra.....	9.75	0.00

Rye Flour.—Trade demand slow at \$7a7.12½, as to quality.

Corn Meal.—Very little doing. City Mills held at \$5 62½. *Grain.*—Offerings at the Corn Exchange this morning were comparatively heavy, footing up 5,500 bushels Wheat, 33,000 do. Corn, and 3,500 do. Oats. The Wheat received was generally out of order, and transactions in both colors were limited. Corn was in active demand for shipment and commanded an advance of 1a3 cents, some 16,000 bushels damp and prime white selling at 11a17 cents and 10,000 bushels ordinary and prime yellow at 11a16 cents.—Oats were in fair request at unchanged prices. We now quote : Prime and choice Southern white Wheat 19a200 cents; good do. 18a191 cents; fair do. 18a185 cents; inferior to medium do. 17a175 cents; fair and prime Kentucky white 18a193 cents; prime and choice Southern red 175a 180 cents; good do. 17a173 cents; fair do. 165a168 cents; ordinary do. 16a163 cents, and fair to prime Pennsylvania do. 163a168 cents. White Corn 11a117 cents; yellow do. 11a116 cents. Oats 68a75 cents, measure, and 90a92 cents, weight, and Rye 14a143 cents per bushel.

Molasses.—No sales reported. Prices nominal at quotations, viz: New crop of Cuba Clayed 53a55 cents; do. Muscovado 60 cents; English Island 50a65 cents, and New Orleans 70a72 cents. Stock of old nearly exhausted.

Provisi ns.—Sales reported of 25,000 lbs. Bulk Shoulders at 9½ cts. There is very little doing in this branch of trade, but the tendency of prices continues upwardly.—We quote new Mess Pork at \$3.25-\$3.24, old do. at \$3.00, old Bacon Shoulders at 9½-9½ cts, new do. at 10½ cts, old Sides at 11½-11½ cts, new do. at 12½ cts, uncovered Sides at 13½-13½ cts, Hams at 17½-17½ cts, and plain do. 13½ cts. Bulk Shoulders at 9½-9½ cts, do. Sides at 11½-11½ cts, and Hams at 13½-13½ cts. City rendered Lard at 14 cts, Western do. at 14½ cts, and Baltimore refined at 16½ cts.

Salt.—Liverpool is in light supply, and firm at quotations, viz:—Ground Alum \$2.25a\$2.30; ordinary brands of fine \$2.90a3 and Ashton's \$3.20 per sack. Turks Island from store commands 60 cents per bushel.

Seeds.—Sales of 75 bushels fair to prime Cloverseed reported at \$8.50a\$8.62½. Timothy we quote at \$3.80a\$3.90, and Flaxseed at \$3.10a\$3.15.

Sugars.—The markets remain inactive but holders are not pressing sales. We quote—

Cuba and E. I., common to good refining.....	\$13.25	a13.75
" " " " "grocery.....	13 50	a14.00
" " " " "prime grocery.....	14.25	a14.50
Porto Rico, common to good grocery.....	13.75	a14.25
" " " " "prime to choice grocery.....	14.50	a15.00
New Orleans, fair to prime.....	14.00	a15.25
<i>Whiskey.</i> —Market dull. Sales of small lots of Ohio at 86a75 cents. City offered at 85 cents.		

FINANCIAL.—Brothers McKim, Bankers, northeast corner Baltimore and Calvert streets, furnish the following quotations:

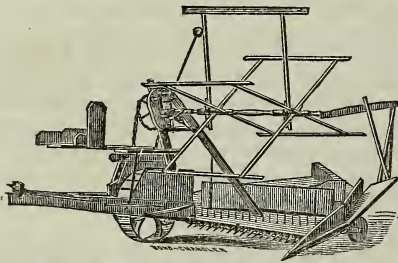
Quotations:		
New York Exchange.....	1-30a	premium.
Boston Exchange.....	Para	premium
Philadelphia Exchange.....	1-20a	premium
One Year Certificates, old.....		103-103½
Do, do, new.....		99½-99½
7-3-10 Treasury Notes.....		109-111
United States Coupon 6's, 1881.....		110½-111½
United States 5-20s.....		107-107½
American Gold.....	5s-59	premium.
American Silver.....	50s-52	premium
Greenbacks.....	1-20a1-5	premium
Legal Tender 5s.....	1-10a1-5	premium

I cut with it 150 acres of Wheat, without stopping one moment for adjustment or repair.—N. GOLDSBOROUGH, Talbot county, Md.

A trial will satisfy the most skeptical that it is *the machine*.—B. M. CRAWFORD, Cecil county, Md.

I cannot speak too highly of the McCormick's Combined Reaper and Rake.—Hon EDWARD HAMMOND, Howard county, Md.

Self-Raker!



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Every article warranted, and at moderate rates.

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20,000 ISABELLA GRAPE ROOTS, 2 years old.

10,000 CATAWBA do. do.

30,000 ISABELLA Cuttings, No. 1.

20,000 do. do. No. 2.

10,000 CATAWBA Cuttings.

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Jan-34

BOOKS FOR FARMERS.

Any of the following Books can be obtained at the office of the FARMER AND MECHANIC at the prices named.—Other books not named in the list will be procured and sent to our friends when desired, if the price be forwarded.

The Horse and his Diseases—Jennings.....	1 25
Cattle and their Diseases ".....	1 25
Youatt and Martin on Cattle.....	1 25
Youatt on the Hog.....	75
Poultry Yard—Browne.....	1 00
Domestic Animals—Allen.....	75
Fox's Text Book of Agriculture.....	1 00
Chorlton's Grape Growers' Guide.....	75
Bridgeman's Kitchen Gardener's Instructor.....	75
The Strawberry Culture.....	75
Buist's Flower Garden Directory.....	1 25
R. L. Allen's American Farm Book.....	1 00
How to Build & Ventilate Hot-Houses, Graperies, &c.....	1 25
Flint on Grasses and Forage Plants.....	1 50
Fessenden's Complete Farmer and Gardener.....	75
Buist's Family Kitchen Gardener.....	75
Every Lady her own Flower Gardener.....	50
Do " " " (paper).....	25
Turner's Cotton Planters Manual.....	1 25
The Skillful Housewife.....	25
Our Farm of Four Acres.....	25
Pedder's Land Measurer.....	50
Jacques' Fruit and Fruit Trees.....	50
Wilson's Lecture on Flax.....	25
Domestic Fowl and Ornamental Poultry.....	25
The American Bird Fancier.....	25
Richardson's Hive and Honey Bee.....	25